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Sept. 1847

Tiger and Snake.

The Banian Tree.

MRS. TRIMMER'S

Introduction

TO

NATURAL HISTORY.

In an Easy and Familiar Style,

ADAPTED TO THE CAPACITIES OF CHILDREN.

With Twenty Five Cuts.

A New and much improved Edition.

LONDON:

EDWARD LACEY, 76, ST. PAUL'S CHURCH YARD;

HENRY LACEY, 64, BOLD STREET, LIVERPOOL;

AND ALL BOOKSELLERS.

—oo—

TO THE

RIGHT HONOURABLE

LADY CHARLOTTE FINCH.

MADAM,

The purpose for which this little treatise was composed can alone entitle it to your Ladyship's notice; for in its execution I fear it is very imperfect; but, as it is intended to lead to the most serious concerns of human life, *The knowledge of the* Great Creator, *and the study of his works*, I hope it will not be thought totally unimportant.

Permit me to say, Madam, that before I ventured to produce it to the world, I had the happiness to obtain the sanction of your Ladyship's approbation, which encouraged me to hope for a favourable reception from the public; as the great success with which you have educated the Royal Family so evidently proves that your Ladyship is perfectly acquainted with the most happy arts of winning the attention of children, and the most proper method of

conveying religious and moral instruction to their tender minds.

With the most ardent wish that your Ladyship may long continue to enjoy every comfort both of public, and domestic life, I have the honour to be,

MADAM,

Your Ladyship's most obliged,

and devoted Servant,

SARAH TRIMMER.

Brentford.

PREFACE.

As it may seem unnecessary to add to the number of books which have already been written expressly for the use of children, I think it proper to mention, that the hint of the following little work was originally taken from Dr. Watts's treatise on education, section the 2d, on the exercise and improvement of the natural powers of children; his words are these:

"Almost every thing is new to children, and novelty will entice them onwards to new acquirements. Shew them the birds, the beasts, the fishes, the insects, trees, fruit, herbs, and all the several parts and properties of the vegetable and animal world. Teach them to observe the various occurrences of nature and Providence, the sun, moon, and stars, the day and night, summer and winter, the clouds and the sky, the hail, snow, and ice, winds, fire, water, earth, air, fields, woods, mountains, rivers, &c. Teach them that the GREAT GOD made all these, and that his providence governs them."

But delightful as these things are to children, if communicated in a way that is accommodated to

their capacities, they can never be brought in their early years to attend to scientific accounts of causes and effects, or to enter far into each particular branch of knowledge.

I therefore thought that a book containing a kind of general survey of the works of Providence might be very useful; as a mean to open the mind by gradual steps to the knowledge of the SUPREME BEING. For as we need only read the *volume of nature*, in order to discover his *wisdom* and *goodness*, a desire of doing his *Will* might from thence be excited in their minds, before they were permitted to read the *Holy Scriptures*, which they should not begin till they had been previously taught that they contain the revelation which he has vouchsafed to make of himself, his gracious dispensations towards mankind, and the duties we are required to perform in order to obtain his favour.

I have never yet met with any *one* book sufficient to answer these purposes; for, though there are numbers excellently calculated to improve those who have made some progress in knowledge, they are in general too difficult to begin with, and therefore require something preparatory; excepting those

which contain exemplary histories suitable to their age: which, though they have a very good tendency are not alone sufficient to form the minds of children.

Nor have I the vanity to suppose that this imperfect performance will fully answer that purpose; it is only meant as a link in the chain of education where there appeared to me to be a deficiency; and I flatter myself that it will prepare the minds of children for higher degrees of knowledge, and so increase the value of some of those entertaining and instructive books which have already been published for their use; for I am persuaded, from experience, that those who can be induced to advance as far as I have here endeavoured to lead them, will naturally aspire to higher degrees of information.

I cannot pass over this opportunity of mentioning a very useful publication, entitled *Lessons for Children from two to four years old*, written by Mrs. Barbauld, (sold at Lacey's, No. 76, St. Paul's Church-Yard), which I think are the best adapted for the purpose of teaching them to read of any I ever met with. I have endeavoured to adopt a mode of expression similar to Mrs. Barbauld's Lessons,

and to build upon the ground-work which tha· ingenious lady has laid for the Instruction of Children, in a style of familiar conversation.

Perhaps it will be thought that I have deviated from my plan of simplicity and ease in the latter part of this work; but I have here taken for my guide the *Archbishop of Cambray's Instructions for the Education of a Daughter*, and indeed copied him in some places respecting the distinction between the soul and the body. To the authority of this great name I shall only beg leave to add my own humble opinion, that children may be taught these things at an earlier age than is usually practised; and surely in this case, above all others, the experiment ought to be made; for if it be thought necessary to teach them betimes the ornamental parts of education, which can be of use only in this transitory life, how much more necessary is it to embrace the first opportunity of seasoning the infant mind with those spiritual graces which are calculated to prepare them for a happy eternity?

Such instructions are of the highest importance, and most essential for all to be acquainted with; therefore, arguing from the goodness and condescension of the Almighty, there is reason to hope that

he will assist those with his special blessing who endeavour to impress the minds of children with a devout sense of their Creator, and a desire of immortal happiness, by calling their early attention to the works of his providence, and the truths of his religion.

Besides the original of Mrs. Trimmer, there are introduced into this *new and much improved Edition*, many interesting facts of Natural History, by various eminent Writers.

AN EASY INTRODUCTION

TO THE

KNOWLEDGE OF NATURE.

I HAVE been thinking, my dear Charlotte, that you and I might take some very profitable walks together; and, at the same time that we are benefiting our health, by air and exercise, might improve our minds; for every object in nature, when carefully examined, will fill us with admiration, and afford us both instruction and amusement; and, I am persuaded, we shall find that nothing has been made in vain.

Though Henry is so young, he is a sensible little boy, and will be able, I dare say, to understand many things which we shall have occasion to talk of; therefore I think to take him with us: I long to see him, as I suppose he is greatly pleased with his change of dress. Oh! here he comes. Your servant, Sir! you are very smart, indeed; I could not imagine what little beau it was strutting along; I suppose, now you

are dressed like a man, you begin to fancy that you are one; but, though you can read and spell, spin a top, and catch a ball, I do assure you there are a great many things for you to learn yet, and I shall be happy to teach you what I know. Your sister and I are going to take a walk; we shall have many pretty things to look at and talk about, therefore I dare say you will be happy to be of our party, will you not?

You know, my dears, in the walks we have already taken in the fields together, I showed you a great variety of plants and flowers; you have seen the cattle and sheep grazing, the little birds hopping and flying about; and though I told you the name of every thing you saw, which I hope you remember, you must learn to know a great deal more about them. Charlotte is going to get herself ready, so fetch your hat, Henry, and let us go into the meadows, where I am sure we shall soon find something worth examining.

Well, Henry, what do you think: is not this a charming place? You know that it is called a meadow. See how green the grass looks, and what a number of pretty flowers! Run about, and try how many different sorts of grass you can find, for it is now in blossom. One, two, three: bless me, you have got eight sorts! Charlotte has gathered quite a nosegay; daisies, cowslips, butter-cups: as for the rest, I do not know their names, so we must search the herbal, where we shall find them, and learn what they are called.

I need not tell you what is the use of grass, because you have so frequently seen the cows, horses, and sheep eating it; but they do not eat all in that state; no, a great quantity of the grass that grows is cut down with a scythe, like what our gardener uses, which is called mowing: then come the haymakers, who turn it over and over again, spreading it upon the ground: and when the sun and air have sufficiently dried it to keep it from becoming mouldy, it is carried home to the farmer's yard, and put together in great heaps called hay-ricks and hay-stacks.

There are thousands and thousands of loads made every year, which serve to feed the cattle in the winter, for there is but little green grass for them then. All of it grows from seeds no bigger than pins' heads: look at the blossom

in your hand, Henry; they would soon have turned to seeds.

In a meadow where there has been hay made, a great many of the dry seeds drop and are scattered about, and grass springs from them the next year: but if people want to make a new meadow, they must keep some seeds and sow them.

The beautiful flowers which you have in your hand, Charlotte, grew likewise from seeds which were mixed amongst the hay-seeds: for the plants which sprung from those seeds, are good for the cattle, and serve to give a pleasant taste to the grass. Besides, numbers of them are medicinal, that is, good to make medicines for the cure of many disorders to which we are subject.

Don't you think that grass is a very useful thing? I am sure the poor horses, cows, and sheep, would say so could they reason and speak: for they have no cooks to dress victuals for them, nor money to buy bread, nor can they ask for any thing they want: so you see their food grows under their feet, and they have nothing to do but to eat it.

Now we will take leave of the meadow, and go into the corn field. Look, Henry; pray take notice, Charlotte, this is wheat. I hope we shall have a plentiful harvest: but it will not be ripe

till August, which is called the harvest month: however, I put this ear in my pocket, which was plucked last year, on purpose to shew you what all this which grows here would come to: rub it with your hands, Henry, blow the chaff from it, give me one of the seeds. This is called a grain of corn. You see there are a great many grains in an ear; and look, here are a great many ears from one root, and yet the whole grew from one single grain, which was sowed last year.

The earth was turned up with a plough, then the grains of corn were thinly sprinkled in the furrows, and the earth drawn over them with a harrow; after they had swelled some time, and become soft, by the moisture of the ground, little roots struck downwards, and stalks grew upwards, broke through the ground, and branched out, in the manner you see here; and produced ears, each of which, perhaps, contains twenty grains; and so, if you reckon all that are grown from the seeds which came up, there may be a hundred times as many as were put into the earth.

This which grows now will be ripened by the sun, and look like that which you rubbed to pieces; then it will be cut down with a sickle, and tied up in bundles called sheaves, and carried to the barn, where it will be threshed, cleaned from the chaff, and sent to the miller;

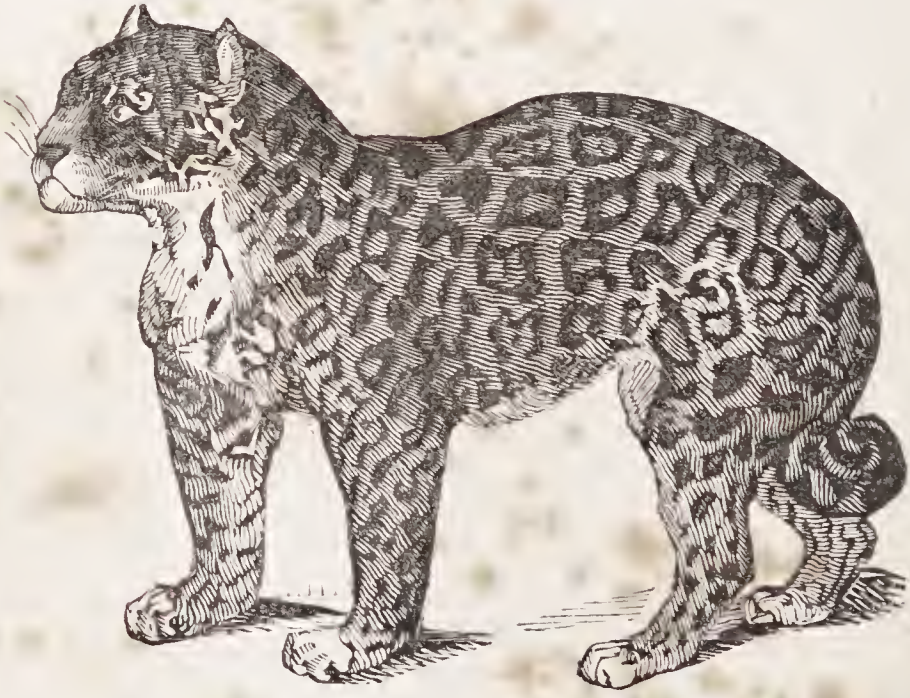
he will grind it into flour, which will be sold to the bakers, who will make it into bread; but they must leave some for puddings and pies.

Only think, Henry, what a deal of corn must be sown every year, to furnish bread for thousands and ten thousands of people! And what should we do without it? For bread is the cheapest and wholesomest food we have; many poor people can get but little else to eat.

But corn will not grow without sowing, as the hay seed does, because the seed is larger, and must be buried deeper in the earth, therefore a deal of hard work must be done to prepare the ground for it. But, my dear Charlotte, I think you have tired yourself; and Henry seems to have done so too; therefore let us sit down on this grassy bank, and rest.

What a fine spreading oak is this, which serves us for a canopy, and shades us so comfortably from the sun! See what a number of acorns hang upon it: they are excellent food for hogs. But do not think that the stately oak is good for nothing but to supply them with provision; it is of the greatest use to us. How large it is! it is bigger round than any man ever was: it has hundreds of branches, thousands of acorns, and still more leaves. It has great roots,

Common Buzzard.



American Panther.

which strike a long way into the ground, and spread all round at the bottom: they keep it from being blown down by the violent gusts of wind, which it frequently has to encounter: and through the roots it is that the moisture of the earth nourishes it, and keeps it alive.

Now, Henry, is it not a very surprising thing that this great tree grew at first from a little acorn? Look, here is a young one, called a sapling: it is so little, Charlotte, that you will be able to pull it up yourself. There you see is the acorn still sticking upon the root. The oak we sit under probably is a hundred years old; when it is cut down, it will be called timber: the sawyers will saw it in pieces proper to be used in building ships and houses.

There are many sorts of timber trees besides, as ash, elm, chesnut, walnut, and others.

When there are a number of trees growing together, the place is called a wood: you have each of you been in one: you recollect that, I suppose, and what kind of a place it was. I wish we were in one now, for it is hot walking.

But I was going to observe, that all sorts of trees grow either from seeds or kernels that are withinside their fruit, or else from little plants

taken from the old roots, or slips taken off from their branches. All timber trees grow without any trouble, for the rain waters them: but I forget to mention the bark, Charlotte, which is this outside part. It is of great use to tanners and dyers: and the dry branches, which are good for nothing else, make cheerful, comfortable fires: so that you see trees are very valuable: nay, poor Henry would miss them, for traps, tops, and bats, are cut out of them.

See how the pretty birds sit singing on the branches: how glad they must be, when it rains, to shelter themselves amongst the leaves: besides, if a heavy shower was to come now, we should be happy to stand under a tree ourselves, provided there was no appearance of a thunder storm: for in thunder-storms trees often attract the lightning, which might make it very dangerous to be near them.

Do not you smell something very sweet? Look about in the hedges, Henry, and try if you can discover what it is. See, Charlotte, what a fine parcel of woodbines he has got: they are quite delightful: take notice, the woodbine is very different from the oak: it has long, slender stalks, and would fall upon the ground, but

that it borrows assistance of its neighbours. Observe how it twists about, and lays hold, first of one thing, then of another. Last month there were briar-roses and hawthorns, that were very beautiful, but now they are out of blossom, and see, the fruit is growing. The briars produce hips, the hawthorns haws; they are for the birds to eat in winter. There are a great many pretty things that grow in the hedges, as you may see, and all are of some use: these are brambles, they will soon produce blackberries. Don't you love blackberries? you shall come and gather some when they are ripe, but you must be sure never to eat any thing that grows wild in the fields, without knowing what it is, because some berries that appear very beautiful to the eye are poison, and would kill you.

There was a little boy who gathered something that looked almost like currants, and as soon as he had swallowed them, his throat and stomach felt as if he had eaten fire; and he swelled and swelled, till in a short time he died; and yet those berries might be very good, and even valuable for some uses.

The farmers plant hedges to divide and secure their fields; for if the cattle should get among the corn, they might do a great deal of mischief; besides, people would not know exactly where their own ground ended, and their neighbours'

began; and the cattle would be very cold in the nights, but that the hedges shelter them.

Don't you think this has been a very pleasant walk, Henry? Shall I cut you a stick? Here, take this, it is a hazel-twig; nuts grow on hazel trees: filberts are another kind of nut, much more delicious: walnuts you have seen growing in our orchard. There are a variety of fruits which are contained in hard shells, in the same manner; as almonds, chesnuts, &c. The cocoa-nut is the largest I know of; you saw and tasted one the other day. I never saw a cocoa-tree, so cannot give you a perfect description of it, but have read that it grows straight without any branches, and is generally very high : at the top it bears twelve exceeding large leaves, used by the Indians in covering houses, making mats, and other things; between the leaves and the top arise several shoots, as thick as a man's arm, which, being tapped, yield a very agreeable liquor, called in the East Indies toddy, from which arrack is made; but freqnent tapping destroys the tree : these shoots or branches put forth a large cluster or bunch of cocoa-nuts, to the number of ten or twelve.

Three times a year the tree yields fruit, which

is as big as a man's head: but there is another sort no larger than your fist, of which they make punch ladles in the West Indies.

It is astonishing to think what a quantity of provision and useful materials these trees supply: they grow in the East and West Indies and in Africa.

There is another sort of nut called the cacoa; this grows in the West Indies and South America. The tree that produces it is something like our cherry-tree, and the nut about the size of an almond; there are seeds withinside, which are made into chocolate, with the addition of some other ingredients. The best sort of this nut is imported from Carraca.

I begin to fear you will be tired; we must therefore think of returning home, but we will go through the barley field.

Observe; this is very different from Wheat; the ears have long hairy spikes, which are called beards. Do not put them into your mouth, for if you do, they will stick in your throat and choak you. Barley is sown in the same manner as wheat is, but does not make such good bread: it is, however, very useful to us; for after it has been threshed, it is sold by

the farmers in great quantities to the maltsters, who pour water upon it, which makes it sprout; then they dry it with hot cinders, and it becomes malt; with the addition of a great deal of water, and some hops, to give it a pleasant bitterish taste, and keep it from becoming sour, it is brewed into beer, which is one of the comforts of life, and helps to give the poor men who drink it strength to do their laborious work. Barley is also good to feed chickens, turkeys, and other poultry.

Hops, you know, grow in gardens and fields, which are from thence called hop-grounds; and run up long poles: when they are ripe they are gathered, dried, and sold mostly to people called hop-merchants.

Now we are come to a field of Oats; pray look at it, that you may know it again from wheat and barley. The poor horses make their meal of oats and hay all the winter; and when they are kept in stables they eat them in summer too; so that you find oats are very useful.

We have in England another kind of corn, called Rye, of which bread is sometimes made; but this is inferior to wheat.

Some countries do not produce corn like that

which grows here, but are in general supplied with something that partly answers the same purpose, though I believe all are glad to get wheat if they can purchase it; and great quantities are exported from England, France, &c. in plentiful years, which is sold to great advantage.

The grain which is called Turkey Wheat is very different from ours. Its stalk is like a reed with many joints, and grows to the height of five or six feet; out of the joints shoot the ears, which consist of a great number of grains, each about the size of a pea, enclosed in coats or husks, which burst open with the heat of the sun, and then it becomes quite ripe.

Millet, I believe, comes from Turkey. Rice grows in the East and West Indies. I need not tell you, for you already know by experience, that they make delightful puddings; and I dare say you think rice-milk is excellent food, and that it is right to let those people who furnish us with such good things have a little Corn in return.

In countries where there is no grain to be had, the inhabitants are under the necessity of eating roots or fruits; and even in some parts of our king's dominions, the poorer sort of people are obliged, from the barrenness of their soil, and extreme poverty, which prevent their either cul-

tivating or purchasing wheat, to eat cakes, puddings, and porridge made of oatmeal; and, instead of a good dinner of meat and bread, are glad to satisfy their hunger with potatoes alone. How happy therefore, my dears, ought we to think ourselves, who have never known the want of bread. I hope you will remember this, and let it be a rule never to waste what such numbers would be glad to have. Even the crumbs which you accidentally let fall, might, if collected, afford a hearty meal for a little bird, and make him merry for the whole day; or would serve to divide amongst its nestlings which might otherwise open their mouths and chirp for food many a time, whilst the parent bird was seeking it with weary wings. I was very angry with you, Henry, the other day, for flinging bread at your sister; but I hope you will never do so any more, now I have informed you what a blessing it is: for I have seen persons who wantonly wasted bread live to feel great distress for want of it.

Can you tell me, Henry, what grows in this field? They are turnips. I will pull one up. This root, when it is boiled, is very wholesome, nd excellent sauce for mutton, lamb, and other meat: there is a great deal of turnip-seed sown every year for our tables, and likewise to give to the cows, turnips being cheaper than hay.

Some fields are planted with potatoes; numbers sown with carrots, a great many with peas and beans, others with hemp and flax, which are very valuable commodities: when I have an opportunity I will shew you some. The stalks of hemp and flax, after they have been beaten, and properly prepared, are spun into thread, of which all linen cloths are made; they likewise furnish the materials for all kinds of ropes and cords. That fine cloth, which your frock is made of, Charlotte, once grew in a field, and so did that of Henry's shirt. It was made in Ireland and Scotland, but a great deal of the same sort is made in Flanders and Germany.

Flax is also spun into exceeding fine thread, for weaving of lace, and working upon muslin.

Instead of these plants, they have in some countries, particularly in the East and West Indies, cotton. Of this they make muslins, dimities, and calicoes. Cotton is a kind of down that is round the seeds of a tree, called the cotton-tree. It grows in pods about the size of a walnut: as they ripen, their outsides become black, and the heat of the sun makes them split open; they are then gathered; and with a proper machine the cotton is separated from the seeds, and afterwards spun for the purposes of weaving. So you see, my dears, there are variety of materials for clothing; and the ingenuity of

mankind has invented many ways of applying them to useful purposes. Even the very bark of trees is, with incredible labour and industry, sometimes converted into curious cloth by savages, who to us appear extremely ignorant; and there and others who weave themselves ornaments and garments of net-work, covered with feathers.

Besides what grow in the fields which belong to the farmers, the gardens afford many excellent things. There are cabbages, and cauliflowers, brocoli, lettuce, endive, cucumbers, French beans; in short, a hundred things very pleasant to the taste, and extremely wholesome.

Besides, you know there are fruit trees, the names of which, I fancy, you are intimately acquainted with; currants, gooseberries, apples, pears, peaches, nectarines, plumbs, grapes, apricots. Don't you wish they were all ripe, Henry? Then, what excellent tarts we could make! and what feasts we should have! Well, have a little patience, my dear, they will soon be ripe, and then you shall have plenty; but you must not eat them before they are ripe; for they will make you very ill.

I knew a little boy, Henry, who used to look as fresh and rosy as you do, and run about, and be merry all day long. His mamma had a great garden, and she told him not to gather the green

fruit; but the little greedy fellow would not pay attention to what she said; like a silly child as he was, he thought he knew better than his mamma, so he stole in unperceived, and ate the green gooseberries, and currants, by which means his stomach being filled with trash, he entirely lost his appetite, and his rosy cheeks became as pale as death; at last worms, live worms, came in his bowels. They were in the green fruit, but so small that he could not see them, and he was taken very ill, and had like to have died: so when all the good children were eating ripe fruit every day, he was lying sick a-bed, and did not get well before it was all gone. Was he not rightly punished for being so undutiful and greedy?

You remember, my dear children, how very beautiful the fruit-trees looked a little while ago, when they were in full bloom; the blossoms are now gone, and the fruits grow in their stead: they will get bigger and bigger every day, till the heat of the sun ripens them, and then they will be fit to gather.

Apples and pears will keep all the winter; but the other fruits will become rotten, unless they are preserved, by boiling them up with syrup made of sugar and water; or else dried; so we must speak in time to the housekeeper, that she may preserve us some damsons and

gooseberries for tarts, make marmalade of quinces, preserve apricots, and make currant-jelly and rasberry jam.

Currants, grapes, and gooseberries will make wine; but that is not at all good for little boys and girls; they can be merry enough without it; and sweetmeats must be eat very sparingly, or they will make you sick, and spoil all your teeth, I assure you.

When you can get no ripe fruit, a little currant jelly, and other things of that kind, are very agreeable; but as for sugar-plumbs, and the rest of those pernicious messes, they answer no purpose in the world but to make people disrelish what is wholesome; and when they have lost all their teeth by indulging themselves with them, it will be too late to resolve against eating any more; therefore it is better to prevent the mischief, by not eating them at all. I am sure I would not part with one tooth for all the sweetmeats in the world.

Charlotte, if you are not tired, my dear, we will go into the flower-garden: as for Henry, he is too much of a man to complain; nay, I am ready to believe he could keep upon his feet from morning to night. Come, sir, take the key, and open the gate. This I think is the more delightful place we have seen yet!

What shall we look at first? There is such a variety of beauties that one knows not which to prefer; you admired those in the fields, but these excel them.

Look at those tulips! examine those carnations! observe that bed of ranunculas! and then admire that stage of auriculas! The whiteness of this lily exceeds that of the finest cambrick. This blue flower is a convolvolus; it is very like the binds that grow in the hedges, only they are of a white colour. Pray, Charlotte, gather one of those very little flowers; I have forgot its name: but whilst one sees it near, it is as beautiful and curious as the large ones. Now turn your eyes to that noble sunflower! that elegant holyoak! that glorious piony!—I beg of you to gather me one of those charming roses: how sweetly they smell! get me also a little sprig of jessamine, and one honey-suckle, for I cannot tell how to leave all these sweets behind me; but I will not permit you to gather many, because it is a pity to spoil them. The

gardener brought us some to dress our rooms with, this morning, and I know if you should pluck any, they would soon be dead in your warm hands, for nothing but water will keep them alive.

Have you taken notice that every flower has different leaves from the rest? That some of them are variegated with all the colours you can name, and polished in the brightest manner? In short, their beauties are too many to be numbered; and when you come to be able to read books of natural history, you will be astonished to find how much can be said about them; but you are too young to understand them at present: however, I must not forget to tell you, that all flowers grow either from seeds, or little roots taken from great ones.

Few of those which grow here, would grow wild in the fields, because the earth there is not rich enough for them. There is a great deal of trouble to make some of them grow at all; the gardener is obliged to do many things, or they would wither away; and particularly he must water them properly; for earth and water are the same to trees, plants, and flowers, as victuals and drink to us; but as they are fixed

to one place, and can neither fetch nor ask for it, it either comes to them in rain and dew, or the gardener pours it on them with a watering-pot.

Some tender, delicate plants will grow only in very light earth, for they could not get through hard ground, any more than you could break through a stone wall. Other plants are strong and stiff, therefore light earth would crumble away, and leave the roots bare, so that they grow best on clay: some require a great deal of water, nay, grow even in ponds and ditches; others will thrive only in sandy ground. Many curious plants are kept in green-houses; they would not grow in the open air in this country, because they are brought from foreign parts, where it is hotter than here; if you were to go to a place a great deal colder than this, you would not be able to bear it like those who always live there.

From what I told you just now, my dears, you must understand that there is not only great variety in what grows out of the ground, but even in the earth itself. Look at the walks; some of them are of a yellowish red colour. That is gravel: does it not make pretty walks; it is exceedingly good for the roads, likewise, Henry, which would soon be very bad where

there are a great many carriages continually going, if they did not spread gravel upon them, to keep them in repair. Of another kind of earth bricks are made, which are afterwards used in building houses, walls, &c. Chalk comes out of the earth. That is very useful to lay upon some sorts of land, in order to make what the farmer purposes to sow there grow the better: it is likewise burnt to make lime of, which, mixed with sand, makes mortar for the bricklayers to fasten their bricks; for they would fall down if they were not cemented together. Stone and marble are dug out of the ground. When they find a great deal together, they call the place a quarry. Some fine churches and castles are built of stone. Marble is used for chimney-pieces, slabs, and ornaments, in elegant houses. The layers or veins of fine-coloured stone and marbles are beautiful in the extreme, they are generally found in the heart of a rock or mountain, and when polished are very valuable.

Coals are likewise dug out of the earth, with which we make fires to warm us, and dress our victuals. Oh! how should we go shivering and shaking about, if we had no fires in the winter. And what would meat and puddings be good for, if we could neither roast, boil, nor bake? for we could not get wood enough for those purposes.

I have not yet told you half the riches that are in the bowels of the earth. Out of them are dug gold, silver, copper, lead, iron, tin; these are called metals. Look at my watch: this is gold: guineas and half guineas are likewise made of it, and it may be beaten into leaves thinner than paper. Did I not give you some, Henry, to gild your oak-apple.

With leaf gold they gild wood: the picture frames in the drawing room appear very fine, but they are only wood covered with those thin leaves.

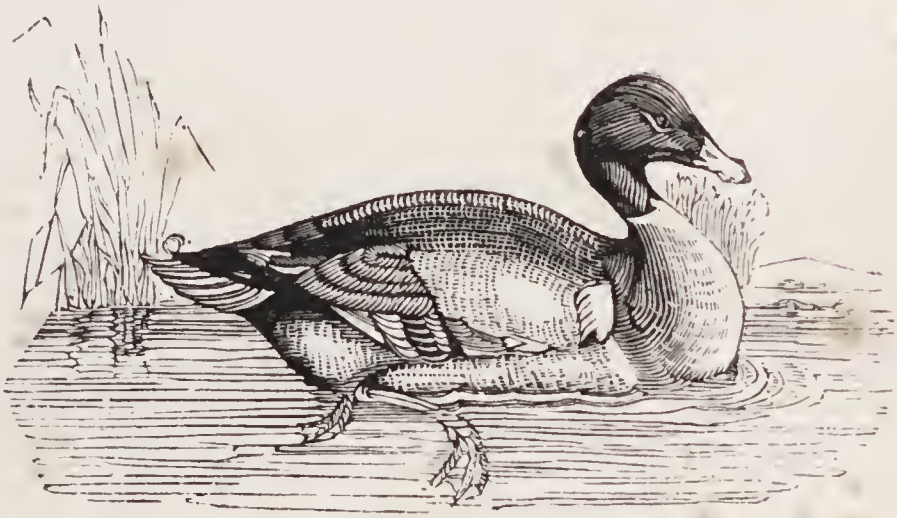
Gold is the most valuable of all metals. This shilling is made of silver, which, though inferior to gold, is yet much esteemed. It is used for coffee-pots, candlesticks, waiters, spoons, and an hundred other things, which people of fortune make use of. Lead is very heavy: there is great plenty of it to be had, and it is of the utmost service to us, for it is made into cisterns to hold water; pipes to convey it from the springs; gutters to carry the wet from off our houses: weights, and a variety of other conveniences. Our saucepans and kettles are made of copper, which would be very unwholesome if they were not lined with tin; which is a whitish metal, softer than silver, yet harder than lead. We have many mines of it in England, and send a

great deal of it to foreign countries. Half-pence are made of copper. Iron is one of the most serviceable things we have: most tools that are used in the fields and gardens are partly made of it: likewise most of those which are employed in different trades, have generally some iron about them: in short, it would take up a great deal of time to tell you the whole of its value. Steel is iron refined and purified by fire, with other ingredients: it is much prized too. Our knives, scissars, razors, needles, and many articles besides, are made of it.

All kinds of precious stone likewise are found in the earth; diamonds, rubies, emeralds, topazes, &c. They do not look so fine when they are first dug up, but there is a deal of patience and labour required in polishing them. Look at the diamonds in this ring, you see they are cut with a great many sides, and the light falling on them, makes the appearance of such a variety of beautiful colours.

Now you see, my dears, that every thing, when we examine it, is curious and amusing. None need go sauntering about, complaining that they have nothing to divert them, when they may find entertainment in every object in nature. But I am sure, if you are not tired, you must be hungry, and I fear the dinner will be spoiled, so

Birds of the Crow kind



Muscovy Drake

British Singing Birds

let us make haste into the house. You have been told enough to employ your thoughts till to-morrow, when we will take another walk, if nothing prevent us.

Good morning, to you, Charlotte, have you seen Henry yet? I did not expect you quite so early: but hope it is a proof that my instructions were agreeable to you yesterday: pray see whether he is up.

Are you not ashamed of yourself, you little lazy boy, for lying in bed so late? I was obliged to send Charlotte to call you. Your sister and I longed to be walking: let us therefore lose no more time, but be gone.

There is the dairy-maid milking the cows. How comfortable the cattle look, grazing in the verdant meadow! I dare say the herbage is as pleasant to them as apple-pie is to you. See what charming thick coats they have got. As beasts cannot make themselves clothes, they have what answers the same purpose, growing on their backs. All cattle have four legs: they do not walk upright, for that posture would be both painful and inconvenient to *them*, whose food is on the ground, as they would be always stooping, which would tire them sadly: and had they only

two legs, they could not move their long heavy bodies with them. Observe what hard hoofs they have got. If they had not, their poor feet would be torn to pieces without shoes. Their great horns serve them for a defence, in case any thing threatens to hurt them, for they cannot get guns, swords, or sticks, you know.

Can you tell me what becomes of the cows and oxen: I am sure you cannot, therefore shall inform you. Do not run away, Henry, see how attentive Charlotte is.

Cows, as you see, give milk: a great deal indeed, which supplies the dairies with cream, for it is put into great dishes, and in about twelve hours the cream rises thick on the top, which is skimmed off. When they have got enough of it, they put it into a churn, and work it about very fast, by which means part of it becomes butter: the remainder is butter-milk, which is very wholesome for little boys and girls.

Cheese is made from milk, and so are puddings too, with the addition of eggs and flour, bread or rice.

The calves are the cows' little ones, and many of them are sold to the butchers, who kill them; their flesh is called veal.

See that drove of oxen! do not be terrified, Charlotte; observe how quietly they suffer themselves to be driven along, so many of them by

one drover. He will drive them to market, where the butchers will buy them; when they are killed, their flesh will be beef, and their skins will be sold to the tanners, who will make leather of them, and sell it to the leather dressers; then it will be bought by the shoemakers, for shoes and boots; by the saddlers, for saddles, bridles, and other things. The horns of these beasts are made into combs, lanterns, &c.

Look at the pretty harmless sheep, with their innocent lambkins by their sides. Sweet creatures! you also have got fine thick coats; they are very comfortable to you in the winter, when you are obliged to lie in the open fields in the frost and snow, but must make you very hot in the summer. Well, a way is contrived to ease you of them; as soon as the sultry heat comes on, the farmer will get you all together, and begin his sheep-shearing; then all your load of wool will be cut off, and you will spring away from him and run frisking and skipping about, like little boys who pull off their coats to play.

The poor sheep would not be so merry if they knew that they should be sold to the butchers too,—but that must be the case Their flesh will

be mutton, and their skins will either be parchment, such as Mr. Green, the lawyer, brought to your papa the other day, and like what your drum is covered with, Henry, or else leather, like the outside of your spelling book.

The sheep's wool is very valuable indeed, for it is sold to the woolcombers, who clean it, and poor old women, who live in cottages, spin it with their spinning wheels. Have you not seen Goody Newman sitting at her work, singing, and happy to think that she should be paid enough for it to keep her from begging?

When the wool is spun it is called worsted, and the weavers make it into cloth for men's clothes, flannels, blankets, stockings, and other things: so that sheep supply us both with food and raiment. But I dare say you think it very cruel to kill the poor creatures. Indeed, my dears, it is a pity; but if some were not killed there would be such numbers that there would not be a sufficient quantity of herbage for them to eat, and many would die of hunger; and now, whilst they live, they are as happy as they can be, have fine green pastures to feed and play in, and when they die, have no relations to be sorry for them, or who will suffer by their deaths; because, though ewes are very fond of their lambkins while they are little, the fondness continues no longer than while they are helpless;

for when they have done suckling them, and shewn them what to eat, they drive them away, and take no more notice of them. When the butcher takes the sheep to the slaughter-house, they know not what is going to be done; and when their throats are cut, they are but a little while dying, therefore they do not suffer much. When they are dead, they can feel no more, you know. We *must* kill them to preserve our own lives, but should never be cruel to them while they live.

Let me look at my watch,—it is past eight,—we must return home to breakfast. Who is that? Oh! it is John coming to call us, and poor Tray with him. You are mightily glad to see us, Mr. Tray, and we are glad to see you too, for you are an honest, faithful fellow. Don't you love Tray, Henry? How he wags his tail, and jumps about. I protest he looks so pleasantly, I could almost fancy he had a smile on his countenance. When we are in bed and fast asleep, he keeps watch all night, and will not let a thief come near the house. When papa goes a shooting and coursing, Tray runs about, round the fields, and across the fields, and finds out all the game for papa to shoot; for he can

smell it a great way off; then he is so good-natured that he will let the little baby play with him, and will never be persuaded to leave his master.

Poor Tray desires no other reward for his services than a little food, and that he may have the pleasure of walking out sometimes with his master, or any body in the family. I have got the key of the paddock, so we will go through it, and take a peep at the deer.

There is a noble stag, with his fine branching horns! Do not you admire him? And see the little frisking fawns? Active as you are, Henry, I think you cannot bound like them.

This kind of animals are only kept by those who have parks and paddocks properly paled in, for they would not stay in the fields as cows and sheep do. Their flesh is very fine flavoured meat, called venison.

Gentlemen often take great diversion in hunting stags. They turn one out of the park, and then let loose a great number of dogs, of which he is so fearful that he runs from them as fast as his legs will carry him; a number of gentlemen on fine swift horses follow him, and are so eager for the sport, that they leap over hedges and ditches to overtake him. Sometimes he will lead them a great many miles; but at last, his weary legs will carry him no farther, he pants with

fatigue and apprehension, stops, and makes an effort to repel them with his horns; but the dogs seize on him, and tear him till he dies. I suppose there is pleasure in hunting, but I think the poor creature should be allowed to return to his park again, in order to make him amends for the terror he must have suffered, and for the diversion he has afforded to his pursuers.

Sometimes people hunt hares also. They go into the fields with their dogs, who can smell them out if they hide themselves ever so cunningly; and when they find they are in danger of being caught, they spring up and run with all the speed they can, and practise many tricks to save themselves; but all in vain, for they are generally overtaken, and suffer the same fate as I told you the stags do.

I don't know how it is with the gentlemen, Henry, but I should feel so much for the poor little frightened creature, as would destroy all enjoyment of the sport. I am sure it would delight me more to save one from its distress.

Well, now for breakfast.—Run into the parlour, Henry; see, Charlotte! there is a good bason of milk for each of you; I dare say your walk has given you an appetite. There is nothing

like air and exercise for improving health and cheerfulness.

Whilst you eat your breakfast I will tell you a piece of news; your favourite Tibb has got kittens, Charlotte; they are in a basket. Call her out to lap a little milk, and then we can look at them. How they mew and tumble about! They cannot now see, but in nine days their eyes will be open, and they will soon begin to play a hundred diverting tricks. When old puss has taught them to catch mice, she will be extremely tender of them as long as they stand in need of her care, and they have no reason to expect her to catch mice for them all their lives, when they will be as clever at it as herself.

Mice are pretty creatures to look at, but they do a great deal of mischief, and so do rats. If we had not cats, we should be overrun with them.

I should never have done, were I to enumerate every kind of animal; but must not forget to mention that there are a great number of *wild* beasts; lions, tigers, panthers, wolves, and others.

They have great strong claws, monstrous teeth, and are so fierce that they can tear a man to pieces in an instant. Now, had they been amongst us like the flocks and herds, what havoc they would have made in the world! we should

not have dared to go out of doors. The cows, sheep, and horses, would have been a constant prey to them: but there are none here: they avoid the habitations of men, and range the forests and deserts far from our abodes.

As their skins make very comfortable clothing for people who live in cold countries, the hunters frequently pursue them: for as there are seldom many wild beasts together, and there are usually a number of hunters, who provide themselves with proper weapons, they frequently get the better of them.

Sometimes they are caught alive when they are young, and shewn about as curiosities: and those who look after them have a way of managing them so as to cure them, in a great measure, of their fierceness: there is no beast whatever so fierce but it may be tamed or subdued by men. I have seen several sorts, particularly at the Tower of London, and read a very entertaining account of that collection in one of Mr. Lacey's little books: I think you have got it, Charlotte; I desire you will shew it to Henry.

The elephant is a most astonishing creature, I believe, the largest of all beasts. Remind me, when we are in the library, to shew you the picture of one; and as soon as I have an opportunity I will take you to the Surrey Zoological Gardens, where you will see an elephant and many

other curious things; their teeth are very valuable. They are ivory, and you know there are abundance of things made of that. You have several pretty ivory toys, and there are combs and knife handles,—in short, one might soon name twenty things made of ivory.

The skin of elephants is extremely hard, and their strength wonderful, so that when they are provoked, nothing can stand before them; yet they are of a very gentle, harmless nature, and will submit to be guided by a man. We read in history, that it was formerly the custom to employ elephants in armies, and they had little wooden castles built on their backs, which were filled with men, who shot from them with bows and arrows. When these beasts had been some time in the battle they grew angry, and then they trampled to death all who came in their way, and could even beat down trees and demolish houses. How would you like to ride on an elephant, Henry? Why, you would look on his back like a little marmoset on a horse.

The camel is another noble beast: we have none of them here, only now and then one, which is shewn about as a sight. You can form no notion of him from a description, but I will look for a picture of him likewise.

In the countries where the camels are, there are a great many sandy deserts; places where

there are no houses for a great many miles, nor a tree to shelter travellers from the scorching rays of the sun; and yet people are under the necessity of taking journeys through them, in order to carry the goods they want to sell from one country to another: it would be impossible for them to bear such heavy loads themselves, and horses would perish with thirst, as there is no water to be met with; but a camel will carry very great burdens, and requires no refreshment on the road: and when he gets to his journey's end will kneel down, that his master may be able to reach his back to unload him: for he is so tall, that it could not be conveniently done otherwise. I could tell you wonderful things of an hundred other creatures, but that I hope you will have curiosity enough to read about them.

If you have breakfasted, and are not fatigued, we will go into the poultry-yard. You, Charlotte, shall carry some barley, and Henry some tares, and I am sure we shall be welcome visitors.

See what a fine brood of chickens that hen has got; and she takes as much care of them as a fond mother does of her children. Do not attempt to catch her chickens, Henry, for she will fly upon you. Yesterday they were in the egg-shell; she laid them in a nest in the hen-house, sat upon them three weeks, and would scarcely come off to eat, for fear they should perish for want of being kept warm. As soon as they were strong enough, they broke the shell, and came out, and she gathered them under her wings; now she is teaching them to peck and scratch, and when she fears that any thing is going to hurt them, she flies at it with the fury of a lion. Poor hen! what will you do now? There is a hawk; oh, how the poor creature is terrified! the little chickens throw themselves on their backs, expecting to be caught up by his talons, and the hen runs about in agonies; for he is too powerful to contest with. Go, Henry, call Thomas. and desire him to bring his gun immediately. Poor hen! the hawk shall not hav your chickens. Now, we have driven him away, come and eat your barley.

We want some eggs for custards, Charlotte, see if there any in the hen's nest. Oh, you have found some; these are new laid; there are no live chickens in them yet, but were we to let them remain for the hen to sit on, some would

grow withinside, and she would hatch them. But we want eggs for many uses, and were they all to be hatched, there would be too many fowls. All kinds of poultry and birds come out of eggs.

It is possible to hatch chickens in ovens. And I have read, that in Egypt this is a common practice, and that as soon as the young chickens come out of the shell they are put under the care of a fowl, which, having been trained to the business, leads them about, scratching for them with the same anxiety that a hen would do. This is certainly a wonderful thing; but, for my part, I do not approve of such unnatural proceedings. I am sure we may have a sufficient number of eggs and chickens in the usual way if we manage them properly. It appears to me a robbery to take the chickens from their parent, and put them under a fowl which provides for, and protects them, only because it is his business to feed and attend little chickens. It is like taking a child from its mother, and putting it to nurse, without her consent, in a place unknown to her. But I have the pleasure of hearing that hatching chickens in ovens has been tried in England and rejected.

There is another foolish custom, which is indeed very common here; I mean that of putting ducks' eggs to be hatched by a hen. You can scarcely conceive the distress it occasions.

The hen, not conscious of the exchange that has been made, supposes she has hatched her own chickens, for she has not sense to reflect on these matters; therefore, when she sees them go into the water, as it is their nature to do, she is seized with the most alarming apprehensions lest they should be drowned, and yet dares not attempt to follow them, as she is not able to swim. I am sure you would pity the poor creature; therefore never make such experiments, as they only serve to gratify curiosity by proving, that it is warmth that hatches eggs.

It grieves one to be obliged to kill any of the poor chickens: but, as I told you in respect to the sheep and oxen, were we to suffer them all to live they would die of hunger, and cause us to do so too, for they would eat up all the wheat and barley, and we should have neither bread or meat for our use. But we will take care to feed them well, not hunt them about; and put them to as short pain as possible. I am sure I could not kill a chicken; but somebody must.

The feathers of geese and chickens are what our beds are filled with.

Don't be afraid of the turkey-cock, Henry; he is a saucy fellow, but has very little real courage. Turn towards him, and he will run away from you as you did from the man who held up his stick at you for flinging stones at him.

Chickens and other fowls have very sharp claws, that they may scratch about in dunghills, and at barn-doors, where they usually find plenty of food; besides, their feet have several joints to them, so that when they sleep at night they still hold fast round the roosts, and preserve themselves from falling. Water-fowls usually sit on the ground to sleep. They endeavour to find a snug corner; but a little damp does not injure them.

Cocks are noble birds, and very fierce; sometimes they will fight till they kill one another; and there are people in the world who are cruel enough to make them do it for their own diversion.

They get two of these fine creatures and fasten to their legs sharp spurs made of polished steel; then they put them in the middle of a round place, covered with turf, called a cock-pit, where they stand about them, hallooing, swearing, and saying shocking wicked words, whilst the cocks fight till one of them dies. Oh, Henry! I hope you will never take pleasure in such barbarous

sports. I can see that your tender heart is moved with the bare relation of it. I could tell you many stories of the bad consequences of cock-fighting, which has frequently been the ruin of those who were fond of it; but hope, before you are a man, you will entertain such sentiments as will effectually preserve you from the danger of practising it.

I will tell you of another kind of barbarity which is practised by cruel wicked boys on cocks. On a particular day in the year, called Shrove Tuesday, they assemble in parties, and fling cudgels at these poor harmless creatures, till they kill them. First one little tyrant throws at a cock, and perhaps breaks a leg; this is mended, as they call it, with a piece of stick tied to support it; and then the next boy flings, who, it is likely, may knock out an eye; another blow perhaps breaks a wing; and scarce a stroke fails of crushing some of its tender bones: as long as strength remains the tortured bird attempts to escape from his tormentors: but continued agony soon obliges him to drop. If he discover the least remains of life he has still more to endure; for they run his head into the ground, to recover him, as they say; this makes the creature struggle, and he is set up once more: a few blows now complete the cruel sport, and he drops down dead, whilst his murderers

exult over him, and call themselves very clever fellows! What do you think of such boys, Henry? Is there not a great deal more pleasure in seeing the happy creature pecking at the barn-door, strutting on his dunghill, clapping his wings, and crowing with joy, than to see his noble courage subdued in this manner: his bright eyes hid with a deadly film, and his beautiful plumage covered with dirt and blood.

See that stately swan, how magnificently he sails along, with his silver wings expanded to catch the fresh breeze. And pray observe his mate, with what pride she leads forth from the nest her new hatched cygnets! Of all the water fowls I ever saw the swan appears to me the most beautiful.

That simple looking goose cuts but a mean figure in comparison of a swan. Observe how she hisses and waddles along! However, we must not despise any thing merely for its looks: geese are very useful creatures, and we are in some measure obliged to them for all the learned and entertaining books we have, since they were originally written with pens made of quills taken from goose-wings; besides geese afford us many

excellent meals; for when roasted they are very good eating. This goose, you see, has got a numerous brood of goslings; and here is mistress duck too, with a fine train of ducklings,—now they go into the pond,—now they swim away,—they are amphibious,—that is, they can live either on land or in water. Observe the feet of the geese and ducks. It is the same with every other water-fowl; they are webbed, and so serve like oars you have seen the watermen use to row with.

There is another kind of birds, called birds of passage, such as quails, wild ducks, plovers, woodcocks, swallows, &c. these do not constantly reside in one place, but go from country to country at particular seasons of the year. They all assemble together on a certain day, and take their flight at the same time. Some cross the seas and fly many hundred miles, which is very wonderful.

Pray look at the peacock. Did you ever see a more beautiful sight? He spreads his resplendent tail which the sun shines on, and shews it to perfection. There is one of his feathers on the ground. I desire you both to examine it particularly. The nearer you look at it the more admirable it seems. And pray pick up some of those which the pigeons and other poultry have dropped: you will find them worth examining. I would have you accustom yourselves to look at every thing; that is the way to gain knowledge.

Did you ever see any gold and penciled pheasants? They are charming creatures. All birds, I think, are pretty: even the owl and the crow are not to be despised when you see them near. But if you are not satisfied with the little information I have given you, we will read some books of natural history, and go to the Surrey Zoological Gardens, where you will see a most beautiful collection. There are many sorts of birds in this country, and numbers different in other parts of the world; but I shall not at present give you a description of them all, because you must take the pains to read about them yourself. I shall only mention the humming bird and the ostrich.

One species of the humming bird is a little creature, scarcely bigger than an humble bee, and so beautiful, that ladies in the country where

they are wear them in their ears for ornaments. The ostrich is remarkably large, and something resembling a goose, but taller a great deal than a man: their eggs are so big that I have seen drinking-cups and sugar-dishes made of their shells, and their feathers are very fine. Those beautiful ones, which have lately been so much in fashion, are ostrich plumes: and so are those fine black ones which are put upon a hearse. These birds are too heavy to fly, but they have short wings, which are of great use in helping them along; and they run with surprising swiftness.

They do not sit upon their eggs, but leave them to be hatched by the sun.

Here is a groom leading a horse. Horses are sent to market, Henry, but not to be killed. Horseflesh is not good to eat; it is carrion, and only fit for dogs and crows. Horses are noble creatures. That is a riding horse. See how he leaps and bounds now he is at liberty. But though he is so strong, can kick hard, and raise himself upon his hind legs, he is so gentle that he will suffer himself to be mounted, and guided any way. His legs are slenderer, and his body not so heavy as the ox, so that he can move

Horse and Groom.

nimbly ; neither is his back so broad but that a man can easily sit across it. He has hoofs also ; but as he travels so much, they would be worn out, therefore all persons who keep horses should be careful to let them have iron shoes, to keep their feet from being bruised. The smith makes them, and nails them on, which, if done cleverly, does not hurt the horses at all.

Don't you wish, Henry, that you could ride on horseback? When you are old enough you shall be taught to ride, and learn to manage a horse ; but if you get on one by yourself, without knowing what to do, he may run away with you and kill you.

There was a little boy who wanted to ride, and had not patience to stay till his papa had bought a pretty little gentle nag for him ; but got upon the servant's horse, which was hung at the gate. He laid hold of the bridle, and could not reach the stirrups : gave the horse a cut with a stick, and away he galloped with him so fast, that the little boy was thrown off with his head against a stone, which fractured his scull, and he was taken up dead. And yet that was not a vicious horse, when he had a skilful rider on his back ; the accident was entirely owing to the child's not knowing how to manage the bridle.

There was another little boy, who was always running into the stables amongst the horses, and

one day he was kicked, and had his ribs broken, for the horse did not know that it was a little boy at his heels.

Those fine large bay horses, with black manes and tails, are coach horses; they are stronger, but not so nimble as the others; those with great clumsy legs, and rough coats, are cart horses. There is another sort of horses, which are very beautiful and swift; they run races, and carry their masters a hunting; but it is very expensive to keep them.

We can walk but a little way in a day, as we soon tire on foot; but when we are upon a horse's back we can travel a great many miles, and see our friends who live at a distance; and it is very pleasant to go in coaches, you know; do not you love it, Charlotte? Now, these pleasures we could not have without horses; don't you think that we ought therefore to use them well? Besides, we could not tell how to manage many things without them, for it would be exceeding hard work for *strong* men to do what horses can perform with ease. It is extremely fatiguing to a poor boy, with his heavy nailed shoes, to walk by the side of a plough all day; but do not you think it would be a great deal harder to him were he forced to draw it along through the tough ground,—and how would *Men* be able to move heavy waggons and carts, and other great

loads, without the help of horses? So I think that the least we can do is to give them plenty of oats and hay, and a warm stable at night. Don't you think those people are very barbarous who ride them too hard, who whip and spur them till they are ready to die? and yet such cruelties are exercised every day; but remember, Henry, that it is both foolish and wicked to act in that manner.

There is a poor ass; he cuts but a mean figure after we have been viewing such beautiful fine animated creatures as horses; but do not despise him on that account; he has great merit, I assure you, for he will do a deal of hard work, and it costs but very little to keep him, as he will be contented with what the hedges afford, or even a few dry leaves, or a little bran; and require no stable to shelter him, nor groom to attend him, so that poor people who cannot afford to keep horses may have an ass, and he will draw a cart, carry panniers, nay, will not disdain to lend his back to a chimney sweeper. Have you not seen the little grinning rogues, with their black faces and white teeth, riding on a jack-ass, with a sack of soot?

I must not forget to tell you likewise, that

asses' milk is one of the finest medicines in the world, particularly for any one who inclines to a consumption: many persons who drink it get well, after they have been so ill that they were thought ready to die. Is it not very barbarous, think you, to treat such valuable creatures with inhumanity? and yet it is very common to do so? I am sure it would grieve you to hear how people beat and starve them frequently.

I must go into the house now, so pray take leave of these favourites of yours for the present.

There is little Dick Williams coming in at the gate; I fancy he has something that he thinks will please us. What have you got there, child? a bird's nest! oh, fie upon you, to rob the poor things of what cost them so much pains to make. The young ones, you say, are flown; well, Henry, take it in your hand, and I will tell you how the birds build it.

Two of them agreed to live together; for though they cannot talk as we do, they can make one another understand: so they set about building them a house. First, they got some small sticks and hay, then, in a snug place, which was not likely to be found out, they began the outside, then they picked up some

moss and horsehair; after all, they lined it with feathers, the hen-bird laid her eggs, and her mate sang to her whilst she sat over them,—at last came out the little birds, and away flew the old ones to get food for them. As soon as they had found any they came hurrying with it to the nest. When the young ones heard the sound of their parents' wings, they chirped, and opened their mouths, as much as to say, "*feed me, feed me.*" The old birds fed them one after the other. Sometimes the hen sat upon then a little while to warm them, then abroad she went for more food, and so the old birds kept on till the young ones were strong enough to fly, when they went along with them to shew them where to get food, and how they must shift for themselves, and all their care about them was over. As soon as the little birds are big enough they will build nests too, and do as their parents have done.

I am always angry with those who take birds' nests, when I think how many miles the poor creatures may have flown to procure the materials, and how hard they must have worked with no other tools but their beaks and claws to build with.

We should not like to be turned out of a comfortable warm house ourselves, though few of us have the ingenuity to build one. The farmers

indeed find themselves under a necessity of destroying some kinds of birds for eating the corn, and hundreds are killed on that account; besides, there are great birds, such as hawks and kites, which devour a great many, so they have enemies enough without little boys. For my part, I would willingly spare them some of my fruit to pay them for their music, and would not have my sweet blackbird killed, which sings so charmingly in the orchard, were he even to eat up all the cherries.

The robins are very tame in the winter, when the snow is on the ground, they will often come and play for days together quite close to the houses; in fact, cold and hunger makes many birds approach the habitations of men, much more than any means of enticement.

You have got a canary-bird in a cage, Charlotte; I hope you take care to feed him well, and keep him clean. He never knew what liberty was, and therefore does not want it; nay, if you should turn him loose, he would starve and die; besides, he could not bear the cold air out of doors in the winter, because canary-birds were first brought here from a hotter country, and only build in houses. But should you catch a

poor bird which had been used to fly about, hop from twig to twig, and sing amongst the branches, he would at first flutter, and almost beat himself to pieces against the wires of the cage; and when he found he could not get out, would sit moping in a corner, and refuse to eat or drink, till extreme hunger and thirst obliged him, and long would it be ere he would be reconciled to confinement.

I knew a little boy, who was otherwise good, but so exceedingly fond of birds, that he would try every means in his power to catch them. One day he had fixed some traps made of sticks and bricks, and being called away to go to school, forgot to mention his traps. He did not come home till a week afterwards, when the first news that he heard was, that a poor robin had been caught in one, where he remained till he was starved to death; a sparrow was crushed to pieces, and another had its leg broke: now, would not any good little boy have been very sorry to have tormented the poor things in this manner? And so was he, and I hope has never caught any since. But I must leave you now, for I have many things to do; and so good bye to you.

The weather continues so remarkably fine, Charlotte, that I long to be abroad. Do you vote for a walk? Henry, I am sure, will attend us; so let us equip ourselves, and be gone.

What is Henry running after? Oh, it is a butterfly, I see; well, you have caught it, poor little tender creature! take care how you handle it; will you believe it? all that powder, which comes off on your fingers, is feathers. I have seen some like it in a microscope, and will shew some to you by and by.

Try if you can find a caterpillar. Why, you have got several sorts! Well, I have a long history to tell you about them when we go home. See what a nest of little ones are in that web in the hedge: as soon as they were big enough to go to work, they spun it to keep the wet off; the dew, you see, hangs without side, and does not penetrate through. There are more! Sure, there are thousands! We have had such dry weather lately, that I fear the gardens and fields will be over-run; they will destroy all the cabbages; the birds may feast away, for they eat caterpillars, as the larger birds destroy *them*.

Behold what a swarm of very minute insects are there, like a cloud before us! You would scarcely suppose that these little creatures, when seen with a magnifying glass, are very beautiful, and adorned with magnificent fringes as fine as

gold and silver, with elegant tufts of feathers; and some parts appear like velvet, embroidered with pearls. Every one of them is furnished with weapons of defence, and all have enemies to defend themselves against; each has some particular plant or herb to feed on, and knows where to seek it. There are some so exceedingly small that they cannot be seen at all with the naked eye, but when seen are as wonderful as the rest.

Look how busy the spider is at her work. Your silly maid has taught you to be afraid of spiders, but I hope you have both of you sense enough to get the better of such ridiculous fears. Pray consider how much stronger you are than they, and how much larger. It is true they will sometimes drop down suddenly, but that is from fear of your hurting them; how often are their nests and webs cleared away? But I never heard that a spider took a broom, and swept a little boy away, or trod one to death. I desire you both to take notice, that when a spider drops down, it always runs away as fast as it possibly can, therefore certainly has no design against you. I tell you what, as they dirty our houses, and cobwebs have a very untidy appearance, I must desire that the housemaid will keep them away: but I am sure little boys and girls may take a good lesson from spiders, and learn

both industry and exactness; for their webs are woven with the most perfect regularity. You will be exceedingly pleased to read an account of their method of working, and I shall shew you parts of them in the microscope.

Take care, take care, Charlotte, mind where you tread! why you might have destroyed a city for aught I know. Look at those little busy ants; they are at work as hard as possible. Do you know that they get all the corn they can, and lay it up against winter comes. They bury their dead, carry their young ones about, and do many laborious things. If all men and women were as provident as they are, there would not be so many beggars.

Let us go and see the bees at work in their glass hives. See, they are in a great bustle: surely there is some curious work going on. Curious indeed, my dear! all the honey and wax we have, is the work of these little creatures. They fly about, and with a kind of trunk they have they suck something sweet out of the flowers; others get materials for the wax, and form the honey-comb, in which the honey is deposited. Are they not very surprising? The cells join exactly together; there is no room lost. This

whole swarm of bees are subject to one bee, which we call the queen; they follow her wherever she goes, and will suffer themselves to be killed sooner than forsake her. But I must not tell you every particular about them, because I want you to read the account yourselves in the books I mentioned to you. Most people keep bees in straw hives, and burn them as soon as they have finished their combs, in order to get their honey; but I bought these glass ones on purpose to have the pleasure of seeing them work, without being obliged to kill them. When the honey is taken you shall see how it is managed, and I will treat you with some for your supper. Should you at any time have a cough, or sore throat, I will make a medicine, with honey in it, which will help to cure you: so pray remember how useful bees are, and never hurt them. Keep in mind also, that not even the least of these creatures, which I have shewed to you, is idle; all are employed. They do not saunter away their time, but take care of their families, and build houses. The young ones learn readily what the old ones shew them how to do; and little boys and girls should likewise be desirous of improving from the instructions that are given them. It is a great deal of trouble to teach children all that is cecessary for them to learn, and very expensive.

If they do not accept of knowledge when it is offered, people will grow tired of instructing them; and they will be laughed at and despised for their ignorance. The days pass heavily along, when spent in idleness and folly. You may now go and divert yourselves as you please, and in the afternoon come to me again.

See, I am prepared for you; here is the microscope; in it is a magnifying glass, that is, a glass which makes every thing appear larger than it does to the naked eye; some magnify a great deal more; but this will answer our purpose. Now some of the wonders I told you of will be presented to your sight. In this box are a set of objects ready prepared for us. Now the glass is fixed. Pray, sir, let the lady look first; if you are a philosopher, do not forget you are a gentleman. Can you guess what this is, Charlotte! Do you look, Henry. It is only part of a feather of a goose, but appears like an entire one. This is a bit of a peacock's, examine it before I put it in; now view it, and you will perceive it to be perfectly beautiful. I am going to shew you the feet, wings, and head, of a common fly; this is its leg, see the claws; the head appears to have an hundred

eyes. I must shew you the parts of a bee. See what a dreadful weapon the sting appears. Ah! Henry, I hope you will be cautious how you catch bees again: and I am sure you will not take a pleasure in tormenting flies, now you have seen what limbs they have. You may assure yourself that they suffer great agony when their wings and legs are torn off. I never could endure, without great uneasiness, to see a cockchaffer spinning, as they call it, on a pin. The noise and humming it makes is its way of crying and groaning. Let me beg of you, therefore, Henry, if you wish to be thought a boy of a generous spirit, never to take pleasure in hurting any thing that is less and weaker than yourself. Think how you should like to have a man tie a string about you, and pull you along, whirl you about in the air till you lost your senses, break your limbs, and perhaps throw you down at last, and tread upon you.

I must shew you this bean; you know I told you that all plants grow from seeds; this is the seed of a bean. I have split it open, and at the bottom you may see the little plant. It is at present too tender to bear the earth next to it, so you see it is provided with a covering. The white part of the bean will nourish the plant till it is stronger, when it will spring out, and the white will drop off, and leave it to the earth,

where it will increase every day till it grows up and comes to perfection. It is just the same with all vegetables, from the humble grass to the stately oak; only, in very little plants, we cannot discover them without exceeding good glasses.

I had like to have forgot this butterfly's wing; there you see the holes where the quills came out, and here some of the bits of dust, which you may convince yourself are actually feathers. I must shew you this little insect, which came off a rose leaf; and here is a drop of vinegar full of little things like eels.

You must not pore too long, for it will hurt your eyes. I have only shewn you these, to convince you that a curious search may discover new wonders; and were you to keep on to the end of a long life, you would not see them all.

What does your brother say, Charlotte? That he wishes his eyes were microscopes. Alas, my dear boy! you know not what you wish for. If that was the case we should see very surprising things to be sure; but then, what we now look at with pleasure, would become monstrous to us. Men and women would appear so large that we could only see a bit of them at once. We should not know a house from a wall, an ox from a mountain, and should be involved in a thousand difficulties. If we

came to a kennel, we might mistake it for a river; take a cat for a tyger, a mouse for a bear: in short, absurdities out of number would follow. So rest contented that your eyes can see with ease every thing that is useful or hurtful to you; and if you want to be curious, there are glasses, you know, to assist you.

I promised you the history of caterpillars, and make it a rule never to break my word, so pray attend to me. I believe I must fix upon silkworms, because they are the most useful to us. First of all they are in little greyish eggs, which may be laid by in a drawer till warm weather comes the next year, when they must be put where the sun shines hot; in a little time they break, and out come small grey maggots; those who keep them pick them up, and lay them upon mulberry leaves; they grow apace, for they eat all day long; in a few days the skins come off, and they look a little handsome when they have got new ones: Soon after they change them again, and then are pretty white worms, larger than before, as big as one of your fingers. They soon begin to look yellowish, leave off eating, and go to work: first they

spin a sort of wool, then they form a ball the size and shape of a pigeon's egg, and are quite hidden from our sight; but their business is not yet complete, they make a lining withinside, a great deal closer woven than the cloth of a man's coat.

Their silk is extremely valuable, and all the fine clothes which ladies wear are the works of these little crawling insects. Who would be proud of being dressed in silks and satins, when they know this to be the case?

A great many of the balls are put into warm water, and those who are used to the business readily find the ends. They are obliged to put several together to make the silk of a proper size and they wind it off in skeins upon a little reel; then they come to the linings I told you of, which they cut open with a pair of scissors, and use them for making artificial flowers. But what do you think they find withinside, silk worms? no, nothing the least like them, but crysalids, as they are called. A crysalis is a brown thing the size of a small bean, somewhat the shape of a barrel, no head, no legs, no body to be seen; but if you touch it, one end will move a little, which shews that it is not quite dead. In this state it lies some days, and then breaks forth a large white moth with

two black eyes, four wings, long legs, and a body covered with feather; view it through a microscope, and you might take it for a chicken. Is it not very astonishing? It truly is, but not more so than many other things. Almost all things in nature, whether they have life or not, undergo as surprising changes.

You want to keep silk worms, Charlotte; I am always glad to indulge you when I can, and will let you have a few next summer, because I could wish you to see these curiosities yourself; but you will never be a silk-merchant, nor will it answer to ladies to keep a great quantity of the worms. Besides, they are reckoned unwholesome when there are many of them together; and it is dirty troublesome work to change the leaves they feed on twice a day. The case is different in those warm countries where they are on mulberry-trees in the open air, help themselves, and spin amongst the leaves. It must be a pretty sight to see the shining balls, like golden plums, amongst the green branches.

All butterflies and moths undergo the same changes, though they do not all spin silk: some creep into holes in walls, others into houses, and some into the earth, and there become crysalids, and remain in that state from the end of one summer to the beginning of the next, when the butterflies come out in all their variegated beau-

ties, and, instead of crawling about, soar in the air, and amuse themselves with flying from flower to flower.

Come here, Henry and Charlotte, look at this globe. Do you know what it was made for? Why, small as it is, it represents the whole earth.

When you were very little children, I dare say, you thought the world was no bigger than the town you live in, and that you had seen all the men and women in it: but now you know better, for I think I have told you that there are thousands and ten thousands of people; you have seen a great many at church, but they are only a small number of what the earth contains. When you go to London you will be quite astonished at the multitudes, for they crowd along the streets in the city like bees in a hive, and are as busy too.

The *world* is an exceeding large *globe*, and *this* before us is a kind of *miniature picture* of it. You see here vast numbers of lines drawn; one part is painted *blue*, another *red*, another *yellow*, another *green*; they stand for different kingdoms.

It is not possible to draw every part of the

great world on a *globe*, any more than it was for the painter to mark every hair of the eyebrows on this small picture in my bracelet. Here is a *pea;* now you see this is of the same form as the *globe*, but we should not be able to describe so much upon it, and yet we might represent the large *green* and *yellow places*, &c. by dots of different colours, and call them *England*, *France*, and so on, just to shew what situations those kingdoms have.

In the same manner then as the *pea* resembles the *globe*, the *globe* resembles the *world*.

The earth is not smooth and even, as this *globe* is; because there are many mountains and hills on it: but though we call them large, and so they are to such little creatures as us, they are no bigger, in proportion to the earth, than grains of sand would appear here: therefore we say it is round.

Neither is the world all land; for there are vast hollow places between the different kingdoms, and they are filled up with water. The largest waters, such as this on the globe, are called oceans, lesser ones seas, and there are others yet smaller, which run in among the land, that are called rivers; there are, besides, smaller pieces, called ponds, ditches, brooks, and others, which are used for supplying us with what is necessary to boil our meat, brew beer, clean our

houses, water our gardens when there is a want of rain, and likewise for the cattle, and other living creatures, to drink. These generally spring out of the earth, and are at first only little streams, but run along till they join with others, and are increased by the rains that fall, and so in time become great rivers like the Thames.

As the land is full of living creatures, so are the waters; for they abound with fish, many of which are caught for us to eat. Some people are very fond of angling with a line and a hook, but I cannot help thinking it a very cruel sport, and always was of opinion that it is an idle one also, and never had patience to follow it. To sit hour after hour watching a floating quill! what an employment! I was told of a gentleman, who, after sitting a whole day in a mizzling rain, was asked by a friend that saw him in the evening what success he had had! Fine sport! fine sport! said he, three bites and a nibble. I should have caught one fish, only my line broke, and it swam away with the hook. This person might truly say, indeed, that he had done no harm, but, in so many hours, how many good actions might he have performed! If none should rest contented without endeavouring to improve their time, what do they deserve who trifle it away! Among many other curi-

ous and remarkable fish, there are flying fish, who when pursued under water by some powerful foe of their own nature, take themselves to the air and are there assailed by some enemy of the bird species;—so that you see all animals prey to a certain extent on each other.

Now let us have another peep at the globe. See what a great part of it is water. Now suppose we were to take a number of those mites which I shewed you to-day in the cheese, and set them to crawl about the globe, they might serve to represent the men and women that inhabit the earth. As there is no real water on the globe, only a picture of it, the mites might go which way they pleased; but suppose the places which stand for water were really dug hollow, and made into little seas and rivers, how would they contrive to get across them to any other part which the water came in betwixt? It is the same with us, for we should never be able to reach parts beyond sea unless there was a contrivance to cross it.

This place is Great Britain, the kingdom we live in; you see it is quite surrounded with water. Now, suppose we wanted to go to France, what could we do? Why, first we should travel either in a coach, chaise, on horseback, or some other way, to Dover, for it is too far to walk thither. At Dover we should meet with a

packet-boat, that is, a small vessel, which carries letters and passengers to France; as soon as the wind was fair for us we should sail away for Calais, as you have seen the pleasure boats do. Then we should go on by land from one place to another, till in time we might reach the city of Paris, where we should find as many people as in London, and see a great number of fine things. In this route we should pass through French Flanders, the country where cambrick and lace are made.

Were we to talk English in France none would understand us, so we must learn to speak French before we go, or they will take us for vulgar, ill-bred persons, because it is known that all genteel people in England learn that language.

When we had seen one foreign country it is most likely we should wish to see others, therefore we might go into Italy; and, as we travelled through the south of France, we should see a great many vineyards, which are fields planted with grape-vines: you know that wine is made from the juice of grapes. We should also visit places where silk-worms are kept; and you would find that they produce such quantities of silk as furnish a very considerable trade. We might travel by land from France to Italy, but must pass over some high mountains, which divide Italy from France, called the Alps, the

tops of which are always covered with snow, and there is a great deal of ice on them all the year round.

You have seen in the winter both ice and snow, but did you know that they were only water? The snow would have been rain, only the air being excessively cold, made it freeze in falling; but as soon as the weather became warmer, it dissolved, and the ice thawed, as we call it, and then both were water again.

After this fatiguing and frightful passage over the alps, where you would be in danger every minute of falling down dreadful precipices, and of being dashed to pieces, but that the men who carry you are used to the ground, and can run as fast on it as you have seen little boys do on a wall: After this, I say, you would arrive in Italy, and there the beautiful appearance of the country would quite transport you; for it is deservedly called *the Garden of the World.* There are myrtles and orange trees growing wild in the hedges, as the hawthorn does here. Don't you wish we could make such hedges in England? Should we attempt it, Charlotte, I fear the first winter would entirely destroy them, because the air is so much colder here than it is there. You

know the gardener always carries the myrtles and orange-trees into the green-house in the winter.

The fruits in Italy ripen much better than ours do, and therefore have a richer flavour; and they have in great plenty several sorts which do not grow here, particularly abundance of olives, which, when pickled, many people are very fond of; besides, there is a great deal of oil made from them; part of which they sell to us, and is what we dress our sallads with. There are silk-worms in Italy also, on the mulberry-trees. The sky in that country is mostly of a fine blue colour, and the sun shines brighter than it does here.

The houses are very magnificent, and most of them large; some are built of marble, for they have a great many quarries of it, and their churches are most magnificently adorned with fine pictures, large silver crosses, candlesticks, and a thousand other curiosities, particularly the noble buildings which were erected a great many years ago, and are now falling to decay, which occasion many people to travel thither in order to see them.

But, amongst the curiosities of Italy, I must not forget to mention mount Vesuvius, a large mountain, which sometimes bursts out with an astonishing noise much louder than thunder, and casts forth flames, with hot ashes and cinders, many miles distant; numbers of houses are sometimes destroyed, and people are killed by these eruptions. A fiery matter, called lava, issues from the mountain, and runs with a most rapid stream for several miles together, carrying away every thing before it till it reaches the sea, which boils and hisses in an astonishing manner when the lava reaches it.

Suppose we were there, Henry, do you think you should like to go up the mountain? Wha say you, Charlotte? Had you not rather live in England, and be contented with what it produces, than go to live near a burning mountain, to enjoy all the fine things I told you of?

There are numbers of these volcanos (as they are called) in the world; the largest we know is mount Etna, in Sicily. In some parts there are what are called *boiling springs*, which are considered most wonderful phenomenons. When you are older you shall read a description of it in Brydone's Travels, which will astonish and delight you.

I am entirely of your mind, Charlotte; were I to go into that country, I should endeavour to

get courage to view it near, but should approach it with trembling steps. But you must not think that these mountains were only made to frighten and destroy people. Like all things else they have their use. There is a great deal of fire within the earth, which, if it had not places to vent itself at, might do a great deal more mischief, nay, destroy it entirely.

The persons who live on these mountains seem to enjoy life as well as others; and, as there are generally some years between the eruptions, they plant vine, and other things, which prove very fruitful; and the mountain usually smokes, or they hear noises from it, which shew that it is near bursting, so they sometimes save themselves from the danger by removing for a time.

When you are older, Charlotte, you shall read books of travels, which describe what is worth observation in every country. Perhaps Henry may be a traveller himself, for you know, gentlemen often make the tour, as they call it, and it is very right they should see the world, if they take care to get sufficient knowledge before they go, to enable them to make proper observations; but for an ignorant person to visit

foreign countries is only to expose his own shame wherever he goes; because every one who sees a gentleman that has left his own country to visit theirs, naturally inquires what he is; and, should they find him deficient in knowledge, he would deserve to be laughed at and ridiculed; but, should he prove sensible and well informed, his company would be sought for, because he could give an account of places which they have never seen: and would be respected, honoured.

The language which people in Italy speak is Italian, and it is very fashionable to learn it; besides, if travellers reside there long, they must be at a great loss without it. The French, indeed, is a language which almost all nations learn: therefore, if a person knows it, he may find somebody or other in most places with whom he can converse; and if they understand Italian (or the language of the persons in that country where they are), they may explain to the Englishman what the Italian says, and to the Italian what the Englishman says; this is called interpreting. But who would wish to be so troublesome to others, when by a little pains and application he may learn all the languages himself, and be an accomplished gentleman?

I think we have staid long enough in Italy, Henry, and am afraid you are tired; so take leave of the world for to-night, eat your supper,

and go to bed: to-morrow I will tell you more. Good night, Charlotte.

Well, Henry, how did you sleep? Did you dream of the myrtle hedges and burning mountains? I suppose you would like to have a full description of every country in the world; but I hope you will one day be fond of reading, then I shall furnish you with books, which will make you acquainted with a vast deal: from them you will learn that some people in the world are black, others have copper-colour complexions: that every country produces something which does not grow any where else: that some parts of the world are hot, others excessively cold: but every climate agrees with the natives, that is to say, those who are born there, better than any other would do,—and the people in one land make themselves as happy as others who have greater advantages, usually thinking their own country the best in the world, and would not change it for any other.

You are an Englishman, Henry, so you must love England the best, and if you travel all the world over you will never find a better country. Here we have neither such piercing cold, nor such scorching heat, as some countries are sub-

ject to,—we have plenty of corn to make bread, barley to brew beer, wool to spin for clothing, flax for linen, the best roast beef in the world, and many other comforts. And we have artists and manufacturers to make every thing we actually stand in need of,—in short, Old England is a very desirable place, and here your friends live, so that I make no doubt, my dear boy, you will return from your travels with great pleasure, tell us, who stay at home, what wonderful things you have seen, and love your native land better and better. But you must not despise the people of other countries because they do not speak, act, and dress, as we do, for to them we appear as strange as they do to us.

I must now tell you a little about the sea. You know I said that between the different kingdoms on the earth there are vast hollow places. Pray observe this large space on the globe; it is called the great southern ocean. You have seen a fish-pond, which is so deep, that if a man stood at the bottom, the water would cover his head; but that is no more than a cup-full, in comparison of this great ocean. Only look what a space it covers on the globe; then cast your eyes to those parts of the land which stand for the

greatest kingdoms. Observe, the sea is by a great deal the broadest; it is so deep, in many places, that you cannot get a line long enough, with a piece of lead tied to it, to reach the bottom. When the wind blows very high it drives the waves up like great mountains of water, which roar, and make a frightful noise by their motion. Sometimes ships are driven about so by the winds and waves, that they are thrown upon rocks, which are a sort of ragged hills in the sea, as hard as stones, some of them of an enormous size, even above the surface of the water, others concealed under it. All sea water has salt in it, which may be separated from it by boiling: salt is so serviceable to us that, after having been accustomed to it, we should not know what to do without it, particularly for meat, which, by being well rubbed with it, may be kept many months.

The reason that the fresh water in rivers does not spoil, and grow good for nothing, is that it keeps running continually from the fountain-head, that is, the place in the earth it first springs from towards the sea; and where there is a tide, as you know is the case in the Thames, it is owing to the ebbing and flowing of the sea, which sends the water of such large rivers back again every day.

The sea is in constant motion; and you would think it very astonishing to stand on the shore,

and behold how majestically its mighty waves follow one another, rolling with a solemn and pleasing noise; gradually advancing till they gain considerably on the shore, and when they have reached the bounds allotted them, and it is high-tide, they retreat in the same manner to visit the opposite shore.

Philosophers tell us that it is the moon which influences the water, and occasions the ebbing and flowing of the sea; and I fancy you will be of their opinion when you are old enough to understand Mr Nicholson's Introduction to Natural Philosophy.

Henry wishes to know where all the water that fills the sea comes from. Indeed, I cannot tell; perhaps it may spring out from the middle of the earth: I rather think it does, and that there is a great collection of water there, but it is of no consequence to us to know that, we are certain that it is of the greatest use to us, and can see enough to admire in it, without searching for its source.

If the hollow places had been left empty, instead of being filled up with water, how frightful they would have appeared! It would have been impossible to have got across to any part whatever. You think we might have had wings to fly over, Charlotte? Why, I must own, that when I have seen the little feathered race soaring

over our heads, and sporting about in the air, I have been tempted to wish for a pair of wings myself; but when I considered how large they must have been to have carried such heavy bodies as ours, I am apt to think we should have found them very troublesome incumbrances, and am sure we are better without them. But had there been those immense abysses I was talking of, and we could have contrived to make a clever pair of wings, we could not at any rate have flown far without resting, and therefore must have tumbled headlong, and been dashed in pieces.

Besides, had there been any fishes, they must all have died, because they can no more live out of the water, for any considerable time, than we can live in it; and now there are various kinds, as many, perhaps, as equal the number of the different sorts of living creatures on the land. Some so astonishingly large that I know not what to compare them with; others as minutely small; many extremely beautiful, others frightful to behold; some of them are most delicious food, and are caught in great quantities with nets. The turbot we are to have for dinner to day came out of the sea, and so do soals, whitings, cod-fish, salmon, lobsters, and many others.

Should all fishes keep in the wide ocean, there would be but few caught, and none but sailors

could eat them; but they come in shoals to the narrow parts of the sea near land; and fishermen, whose business it is, go out in boats, throw nets into the sea, and catch them; then some are sent to all great towns, and from thence sold to every place to which they can be carried before they are tainted or spoiled: some again, such as the cod on the banks of Newfoundland, are caught with a hook and very long line; a bit of fish, or red rag, is fastened to the hook, and serves as a bait to entice the fish to it. They are then salted, and sent in ships to different parts of Europe, which furnishes employment for a great number of sailors, and is an extensive and profitable branch of commerce.

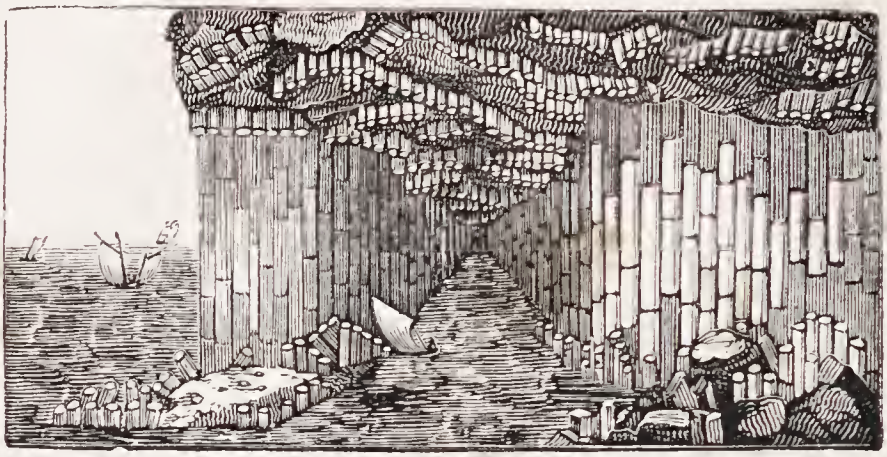
If we did not eat fishes, the larger kinds would, for they prey on one another as birds and other animals do. In scientific books of natural history there are a great many entertaining things concerning fishes. Only think what a deal of pleasure you will have, Henry, when you can sit still long enough to read them, and are sufficiently improved to be able to understand them! In many of those books there are correct pictures of what they describe.

I forgot to tell you that fishes have no legs. You know it. Oh! I beg your pardon, sir, I did not recollect what a man I was talking to; give me leave to inform you, however, why they have not; because they have no use for them, and would find them very troublesome; their fins answer the purpose of swimming much better.

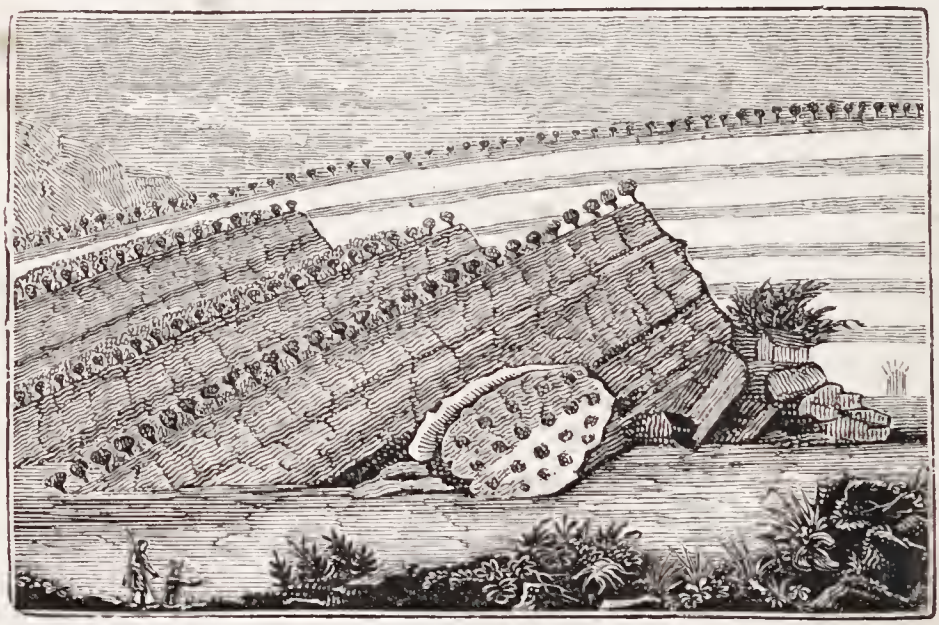
Many fishes have very sharp teeth, others thorns at their sides, and various weapons of defence; and, instead of clothes, are covered with scales, which the water cannot penetrate.

There are a great many things growing at the bottom of the sea, called sea-weeds. I have a picture in my dressing-room made of them; you have often admired them, Charlotte. Indeed, they are extremely curious; the fishes, I suppose, eat them.

Besides those I have been speaking of, that swim about, there are a vast number of shell-fish. That cabinet which stands there is filled with shells: it contains a great variety, but there are, for aught I know, hundreds more. Some are much larger than any here; others you see so small that you could not perceive them unless they were laid on white paper; and yet in the microscope they would appear to as much advantage as the insects did. Observe, what curious shapes and variety of colours! I know, my dears, you admire this beautiful



Fingal's Cave. Island of Staffa.



A Coral Reef.

collection, and well you may! every one of these shells formerly had a fish in it; it used to come part of the way out, as you have seen a snail do, and draw back again at pleasure; they generally remain at the bottom of the sea, but sometimes storms throw them on shore, where they are picked up and kept by curious people.

There is likewise coral, both white and red. Here is a bit of each; that beautiful yellow substance by it is amber; it makes elegant cabinets and other things, and the ladies in former days were fond of wearing necklaces of it. On some shores there are what are called *coral reefs*, most beautifully variegated; covered with the finest coral of various colors;—presenting a most charming sight. Christatigations are sometimes formed by nature in most fanciful forms, as *Fingal's Cave* in Scotland; which is a collection of beautiful basaltic columns, and may justly be styled one of the Wonders of the World.

All pearls come out of the sea too; there are great quantities to be met with in a particular kind of oysters; and people, called divers, have the skill to sink themselves to the bottom of the water, and, by means of some ingenious contrivances to supply them with air, are able to stay long enough to get a great many pearls, which they sell for a deal of money; and those who can purchase them think themselves very fine when they are adorned with them.

People of fortune should have handsome clothes, jewels, and other ornaments, because it is very right for them to dress better than their inferiors, who could not afford such things, as they find it hard to get money enough for the bare necessaries of life; therefore, persons who have plentiful fortunes ought to encourage labour and ingenuity, by laying out some part in buying what others sell and make, to procure themselves and families a livelihood; but it is very wrong to value themselves on riches and fine clothes, for they should consider that gold, silver, and jewels, come out of the bowels of the earth, and that they could not *make*, nor probably *find*, any of them: that their finest silks are spun from the entrails of a little crawling worm, and that after it is spun they could not use it till it had gone through the hands of many poor workmen: what would the rich do without the

poor? Could they make their own shoes, build their houses, plough their fields, sell their timber trees, share their sheep, and a hundred other things absolutely necessary to be done by somebody? They should therefore learn to behave with kindness and condescension to the industrious, and remember that the meanest artificer, if he discharge the duties of his station, is preferable to themselves, unless they are distinguished as much by their benevolence and greatness of mind as by their rank and riches.

Neither should the poor ever forget how much they are obliged to their superiors, and how much they depend upon them, but treat them with all possible respect, and never envy them; for as they have no money nor land of their own, they must perish for want of necessaries unless they could obtain some by their labour. If they are so fortunate as to be paid for what they do, they can purchase what they want with the money, you know, and may, in their humble condition, enjoy an equal share of happiness with the rich, and avoid many anxious cares and dangers, to which an elevated station is frequently exposed.

I dare say you did not think there were so many curiosities at the bottom of the sea, nor should we ever have known it, but by the invention of ships, which was a very curious and useful contrivance. Fine china, muslins, calicoes, spices, and other articles, are brought from the East Indies in ships, which carry back in exchange what our own country produces; they also convey to England vast quantities of tea, which is a plant that grows in the East Indies in great abundance; the leaves of it are dried upon plates of metal, heated; this makes them curl; then they are packed in boxes and canisters, and sent to different parts of the world: But a good bason of milk, or tea, made from herbs, which our own gardens supply, are, in my opinion, greatly preferable, and much more wholesome for us.

From the West Indies we get sugar, which is produced by boiling the juices of a particular sort of plant called a sugar-cane; the inhabitants have large plantations of it, which bring them in a great deal of money; but the poor negroes, who are employed to work in the plantations, undergo severe hardships.

Negroes are black people; many persons in England, you know, have them for servants. Abroad they toil like horses, and are frequently much worse used, which is an exceeding barba-

rous thing, for they are *men* as well as their masters, though they be of that black colour; but how much does it pain me to tell you that this inhuman commerce, which puts these poor creatures into such a dreadful situation, is carried on by Englishmen, and even authorized by our own laws.

From Spain we get oranges, lemons, nuts, almonds, figs, and raisins, (which last are dried grapes;) from Lisbon the same, and, besides those articles, a great deal of wine. If there were less of that it would be better; for many people drink so much of it as to hurt their constitutions. Would they make it a rule to drink only when they were thirsty or weary, and leave off drinking as soon as they were refreshed, they would preserve their healths, and might perhaps live many years longer.

I could mention the productions of other countries, but do not intend to travel round the globe with you. I shall only tell you that there are many things valuable and worth observation in every part of the world; and those which you have no opportunity of seeing, you may read of in books, which will give you much better accounts of them than I am able to do.

You find, my dears, what great use ships are of, but how shall I make you understand the nature of a voyage? I will take you both to Mr. Wilson's, where you will see a model of a ship that is, a little thing made exactly like one, only a great deal less, as you will judge by the figures which represent the sailors. Mr. Wilson will explain the masts, sails, ropes, and other parts, which I am totally unacquainted with.

When a voyage is to be taken, the ship is first perfectly repaired, if it be not a new one, so that it may effectually keep out the water, and not sink. The sails and masts must be in exact order, strong, tight, and whole, that they may be able to stand the force of the winds; then they lay in a great quantity of biscuits, as bread would soon get mouldy; several casks of fresh water, for that in the sea is very nauseous; some barrels of salt beef and pork, because they cannot get fresh meat when they launch out into the wide ocean, and leave the fields and meadows behind them. They carry as much garden stuff too as they conveniently can; when it is gone, they are obliged to make shift without, till they land somewhere to get a fresh supply.

A ship which goes on a trading voyage, besides a stock of provisions, takes in her cargo, that is, the goods which the owner proposes to sell in foreign countries; such as wool, watches,

hardware, I mean knives, scissors, various kinds of tools, and numerous articles, which other nations are glad to purchase from England, because they are made better here. Every ship requires a certain number of men, some more, some less according to the size of the vessel; for there is always a great deal of work for them to do, especially in stormy weather. One time all the sails must be spread in order to receive the wind, at other times all must be furled, or taken in, to prevent the vessel's being overset by violent squalls of wind. They have large iron things on board called anchors, with very great ropes, or cables, which are tied to them, and fastened to the vessel, and when they want to keep the ship in a particular place, they cast them into the sea, where they can reach the bottom, and they stick into the ground and fasten, so as often to preserve the ship from being lost. Somebody on board is obliged frequently to keep letting down a line with a large leaden plummet, that they may know the depth of the water. A man stands at the helm, with a compass before him: the helm turns the rudder, by which means he can steer the ship to any point of the compass he pleases, according to the directions he receives from the officer who commands the watch.

When the vessel is perfectly fitted, and ready for her voyage, the captain is impatient to be

gone, and keeps himself and all his jolly tars in readiness to sail with the first fair wind; but I believe I must inform you what I mean by a fair wind. Let us just step out of doors. Now look forward; that is east, behind you the west, on the right hand the south, on the left the north. Now, you know, that when the wind blows behind you, it forces you along; when you face it, if very high, you can scarcely stand against it; but it does not always blow the same way: let us go in and look at the globe. Here is the east, west, north, and south: now, if they want to sail to a country which is north, they must have a south wind to blow them along; for if the wind were in the north, it would be impossible for them to get forward; so that sometimes a voyage is made much longer than it would have been, from the wind's changing about from one corner to another, which often obliges them to go to other places, if it blow very high; but they are not obliged to return for every change of wind, because the art of navigation teaches the sailors a method of managing the ship, so that they can get on by crossing backwards and forwards, though if it blow right it saves them a deal of trouble.

It is a very surprising thing to think of, but it is really true, that in some parts of the sea the wind will blow constantly for months together

every year, the same way, which enables ships to reach the places they are wanted to go to; and then the wind turns and blows the direct contrary way, which brings them back again: therefore people contrive these voyages so as to endeavour to get to those parts time enough to have the benefit of them: They are called trade winds, or monsoons, and these arrows on the globe shew the particular parts of the ocean they blow in.

When people are out in the wide ocean, they are frequently whole months together without seeing any thing besides sky and water, excepting what their own ship contains. Look here, for instance, in the middle of the great southern ocean: it is very distant from the land, and there are no paths marked out on the surface of the water, to shew the nearest way to any place; but those who have been there formerly have kept the exactest account they could of the rocks they escaped, the little islands they met with, and other particulars, which serve those who come after them, as some rule to go by; for there are maps, or pictures, called charts, made of those parts of the sea, which people who sail that way carry with them; by which means they know how to escape rocks, quicksands, whirlpools, and

other dangerous things, which are described to be in particular latitudes. You must at present be contented without an explanation of the word latitude; you will know all about it when you learn geography.

But after all their clever contrivances, they would be utterly at a loss without a compass on board, which is an instrument that looks like the dial of a clock, only, instead of the hours, they put east, west, north, south; in the middle comes up a little spike, upon which is a needle that has a small hole in the middle of it, to receive the little spike, upon which it hangs very lightly. This needle must be rubbed on the load-stone, which gives it the remarkable property of pointing always to the north. One of these compasses is fixed on board every ship, and when they look at it, they can tell where the north is, and order the ship accordingly; because they can either sail towards the north, or from it, as suits their purpose, you know. But I shall soon get beyond my knowledge here, Henry, and must own myself a very indifferent sailor; so I have done with navigation; but must say a little more about the loadstone or magnet, as it is certainly a most wonderful, as well as useful thing.

The loadstone is hard, very much resembling iron, and usually found in mines with that metal. It attracts or draws iron and steel, so as to make them stick to it. If you rub those metals upon it they will attract also, though in a less degree. Here is a magnet, with two pieces of steel fixed in it; they are called its poles; one the north, the other the south. Now, let us see what effect they will have on these needles which we work with: I will lay them on the table. Hold the magnet over them; see how they jump up; you would think they were alive: but it is only that the loadstone draws them; they would lie still enough if there were no loadstone near them. Now, take notice, I will touch two others, one at each pole. If I attempt to bring that which has been touched by the north to the south pole, it will drive it away, and so of the other, which is called repelling it.

I will give you this pretty little magnet, Henry, which I have got in a case. It is only a piece of steel, that has been rubbed in the manner I said, but will divert you very much. How the loadstone performs all this I cannot tell, any more than I could inform you where all the water in the world comes from; but there are many things we see that we have not wisdom to understand perfectly; happy it is that we can learn so much as we do!

Don't you think, Henry, that it is very entertaining to hear of all these wonderful things which I have been telling you of? and will you promise me to endeavour to remember them? Why, you will be able to instruct William by the time he is as big as you are now; and will not that give you pleasure? Now you may go and amuse yourselves; I have a hundred things more to tell you, but would not tire you with too many at once; so adieu for the present.

Well, Charlotte, I see, by the preparations you have made, that you intend to solicit me for a walk. It will be equally agreeable to me after the heat of the day, and our little beau will, I make no doubt, attend us. Come hither, my charming little fellow! you are so good-natured, Henry, and so attentive to my instructions, that I am happy to have you by my side. Charlotte and I are going to walk in the fields, and could not bear to go without you, though I fear we shall be obliged to make you sit up beyond your usual hour.

We will first walk up this shady lane, where we may gather batchelor's buttons, and numbers of other flowers, which were not blown the other day; there will be fresh ones continually till the summer is over.

Who will get over the style first? The gentleman, to be sure, and then he can hand the ladies, you know. Take care! take care! Henry, do not be in too great a hurry, lest you tumble, and that would be a sad disaster, to see our beau rolling in the dust. Now we are all safe.

What a delightful prospect is here! How rich the earth looks, with the beautiful mixture of pastures, where the flocks and herds are feeding, and corn fields almost ripe for harvest, which promises bread for thousands! How cool and refreshing does that river look, winding along amongst them. Then that majestic wood! where grow oaks, which perhaps will one day be made into ships and plough the ocean to bring us treasures from distant lands. But above all observe the glorious sun! he appears to be now sinking in the west, but to-morrow will shew himself in the east. I think I have never told you any thing about him, and indeed I scarcely know what to say, because many particulars which are known concerning him you could not at present be able to understand. However, you may depend on it, that I will never tell you any thing but truth, and if you do not comprehend me now, you undoubtedly will, when it shall be repeated to you some time hence, when your understanding will be improved. You

must endeavour to gain a little knowledge every day, and in time you will have a considerable share.

Well, the sun then is supposed to be a very large globe of fire, but different from any that we know. It is thousands and thousands of times larger than the world we live in. It keeps every thing that grows alive by its heat; for in all plants and trees there is a juice called sap, which, if the sun did not melt it, would be so thick that they would not shoot out. You know, that in the winter all the leaves drop off the trees, and there are no plants or corn growing; that is because the sun shines but little at that time of the year, rises late, and sets early, so that the earth has but little of its heat, to what it has in the summer, when it appears by four o'clock in the morning, and we do not lose sight of it till eight at night. The sap has not time to get thick in those short nights; besides, the air, though cooler in the night than in the day, retains a great degree of heat, and is not like the chilling cold of winter, even at noonday. I saw you, very curious the other day, Henry, examining the carpenter's glue-pot when he was at work in the house. Did you not observe that

the glue was very thick before it was put on the fire, but, when it had been on some time, it melted and became quite thin? Now we may compare the sap in the trees to glue, because, like that, it requires heat to melt it. If the glue-pot should be put on a fire, and taken off soon, it would not be much melted, and if it stood off a long while would be quite hard; but if you set it on long enough to dissolve it entirely, and keep it from the fire but a little while at a time, it would never get cold and thick. In the same manner the sap is affected by the summer and winter. The continued heat of the sun in the long warm days dissolves it so entirely, that it cannot get thick in the short nights, and, on the contrary, in the short cold days it does not receive warmth enough to melt it.

Winter is a dreary, unpleasant season, though of very great use, as it prepares the earth for the growth of the various fruits which the other seasons produce, and in its turn is exceedingly beneficial to our healths, though, were it to continue always, we should be in a terrible situation; but as it is only for a little while, we do very well, because there is plenty of provision, both for man and beasts, laid up in barns and ricks.

There are coals and wood to make us cheerful fires, and there has been wool enough taken from the sheep's backs to furnish us with flannels and other warm clothing. When we have felt the pinching cold of this uncomfortable season, we are the better prepared to enjoy the lively one that follows. How agreeable it is to see the trees which have been stripped of their leaves renewing their verdure; to behold the little crocuses and snow-drops peeping out of the ground; to hear the little warblers chanting forth their notes as if they were singing songs of joy; and to observe the poor people come out of their cottages with cheerful looks to pursue their daily labours, now no longer hindered by winter's frost and snow, which must have been dreadful to those who could not afford themselves good fires and warm clothing.

I am going to tell you a very surprising thing, Charlotte. I dare say you think the sun goes round the earth. It does not, I assure you; it is fixed, and the world goes round it once in a year. Before they discovered how large the sun is, people thought as you do; but now we might as well suppose (as Mr. Ferguson said) that if you had a fowl to roast, it would be necessary to keep a great fire going round it, while the spit remained immoveable. No, I think indeed if the earth wants so much assistance from the

sun, it is very well worth while to travel for it· and thus the matter really is ordered.

But we must begin to think of returning, for there is a deal of dew on the grass, and I fear we shall wet our feet and catch cold. This dew is very refreshing to the earth, and as acceptable as a glass of water to you when you are thirsty.

There is, as I told you, a great deal of water in the earth, but in summer it lies very deep, and could not get up of itself to moisten the plants; however, the heat of the sun draws it, and when he sets, it falls and supplies the want of rain, of which you know there is but little in the sultry weather. Much of it would do a great deal of harm; spoil the hay, beat down the corn, and a hundred bad things. After all the crops are got in, it is very necessary to make the earth fit to receive the seed, and to help it to grow afterwards; for were the ground to continue always as dry as it is now, there would be great difficulty in breaking and turning it up with a plough, and the seed, when sown, would not swell at all; however, the sun not only draws moisture out of the earth, but much more out of the sea, which goes up high in the air, and gathers into clouds, that are driven about

by the winds, till they come over different parts of the land; and when they are too heavy, they break, and fall down in showers. You may have some notion of this, if you put some boiling water in a tea-pot, and cover it with the lid. When it has stood a little while, if you take the lid off, you will find drops of water withinside. The heat which the fire left in the water caused them to rise up. In the same manner the sun acts in respect to the sea, and perhaps the fire that is withinside the earth may heat the water at the bottom, and help to make the vapours rise.

Why, I shall make a little philosopher of you, Charlotte! I do not mean, my dear, to excite a desire in your mind of entering too deeply into the study of these things. I would only have you read some easy books on the subject, that you may not, like the ignorant common people, think the sun a little thing, the size of a plate, and placed in the heavens only to be gazed at. I am glad we are almost at home, for it begins to be very cool, and I imagine you wish to go to rest. To-morrow evening we will once more look at our globe.

Oh! you are come to claim my promise, which I shall gladly fulfil. Now for the globe. I told you that the sun remains always in the same place, and that the earth goes round it once in every year; besides that, she turns round every day. You think it strange to move two ways at once. Not at all. Why, you can do the same, I am sure; you may keep turning about, and contrive so to change your place every turn, that you can get from one end of the room to the other by degrees. What I want to convince you of at present is, that the earth's turning round is the cause of day and night; you must therefore suppose this candle to be the sun standing still. Now, I will put a little pin in the middle of this side of the globe next the candle, another in the side which is turned from it. When I turn the globe about, the side which is now dark will be enlightened, and the light side will be in darkness. This is a representation of what happens to the earth every day and night. These places on which the sun shines have daylight; those on which it does not shine are in darkness: by this means all parts of the world have the benefit of the sun's heat to warm and ripen their several productions; and likewise to refresh the earth, plants, and animals; for you know it is after the sun disappears in the evening that dews fall. The

parts of the earth which are represented here where the wire comes out, are called the northern and southern poles. They are very cold places; for sometimes the sun is not seen there for several months, and then they never lose sight of him for several more. The reason of this you will be told when you are taught the use of the globes, for which I will procure you a more able instructor than myself. I shall only tell you that the absence of the sun is not so great a misfortune to those people who are subject to it as it would be to us; because those countries where it happens, do not produce the same things which England does; and all that grow there naturally are so formed as to be able to live in that climate. The inhabitants are as happy as we: they work hard in those months while they have day-light, and lay up stores for their long winter, when they dance and sing, and are as happy by torch and lamp-light as our country lads and lasses when they celebrate harvest-home, enlightened by the mild beams of the setting sun.

In the last mentioned countries they catch whales also, which I must give you some little account of.

They are fishes of an enormons size. I have read of some two hundred feet long. You, Charlotte, know how much a foot is, but Henry does not. This piece of string is a foot long. You can count a hundred; one, two, three, four, five, &c. very well; only think then of a living creature two hundred times as long as this peice of string! What large eyes he must have! And such a throat, that he can swallow a man up at a mouthful; and yet this creature may be overcome, and vast numbers of them are killed in Greenland, particularly by people who go from Holland. Find Holland on the globe. This is the frozen sea; so called because there is generally a great deal of ice in it. The air of this place is so cold, that one would think nothing could induce people to venture thither; but many do, for their voyages are very profitable. They have a particular kind of vessels on purpose for whale fisheries; and when they see one they immediately throw a sort of dart at him called a harpoon, which sticks in, and wounds him, and then he sinks under the water with the harpoon sticking in him; but there is always a string tied to it, with a large gourd fastened to the other end: this floats on the water, by which

they know whereabouts the whale is, and wait for his rising up again, when they are ready to strike at him with their harpoons, till with repeated wounds he dies. When they have killed him, they lash him to the side of the vessel, or find means to drag him hard on the ice or shore, and cut him to pieces, and put his fat into casks, which they boil and make oil of, and sell it for a great deal of money when they return home, for it is useful in dressing several sorts of skins, likewise wool, and in a hundred other things.

The people who live in that cold country, where I told you they continued for several months without the light of the sun, burn this oil in lamps; and it is quite a treasure to them.

The large whales have two monstrous tusks, sometimes fifteen feet long, which rise out of their jaws, and serve them to gather the weeds together, upon which they are supposed to feed; These tusks are split, and made into what we call whalebone; which is likewise sold to great advantage; for it is used in stays, whips, and many other things. The inhabitants of these countries catch a number of wild beasts, and make very comfortable clothes for themselves of the skins. Ravenous animals are more numerous in southern and warmer countries: as Lions, Tigers, Leopards, Panthers, and many others.

I hope you perfectly understand me, my dears, in respect to the earth's turning round. You do, you say, Charlotte; but Henry looks a little doubtful. You think if it were so you should tumble off. No, you would not: for there is something in the earth which draws you towards the ground in the same manner as a loadstone draws iron and steel. Pull your magnet out: take up this needle: there, see, if you turn them round an hundred times, it will not drop off; and if you pull it away, it will fall towards the magnet again. So, if I were to hold you up high, and let you go, you would tumble to the earth, because it draws you. The steel of which the magnet is made is hard, and therefore the needle cannot enter it, but sticks to the outside; the surface of the earth is likewise hard, or we should be all drawn into it. The needle has no life in it, therefore cannot move about on the magnet, or it might go all over it, because one part does not draw any stronger than another. We, you know, are alive, and therefore can change our place upon the earth; but were we to attempt to fly into the air, we should infallibly tumble down; and not only people, but every thing on the earth, is affected in the same manner. If we ride upon a horse, we are still attracted, but his body supports us from falling to the earth, because it is impossible for us to tumble through

a horse: but if by any accident he shakes us off, down we come to the ground immediately.

You wonder we do not feel the earth move. Why, do you think this little mite which stands here on the globe can feel that move? I dare say he cannot, but seems to himself to stand quite still while it is turned round; for all that he sees about him are moved as well as himself, and therefore he remains in the same place on the globe. Could he be taken in a moment from this part of the globe to that, and had the understanding of a man, he would be convinced that it really does turn round, because he would find the face of the sky perfectly changed: for suppose he was removed at midnight, when the moon was shining, and the stars glittering in the heavens, he would, to his astonishment, find himself in broad day, enlightened by the meridian sun.

But till you are older you cannot understand much about the stars; and, indeed, I know but very little of them myself: sufficient, however, to fill me with wonder and admiration. I am convinced, in my own mind, that it is possible there may be thousands and ten thousands of suns and worlds, many of them much larger than this which we inhabit; it is as probable to me, as that we might roll thousands and thousands of marbles about different parts of this

earth without their touching or coming in one another's way; because I am sure there is room enough for them in the heavens; and, I think, if you turn your thoughts that way, and read what has been written on the subject, when you are old enough, you will be of the same opinion.

What do you say, Henry? Do you think that the people on that part of the earth, which is opposite to us, stand at this time on their heads? Indeed, my dear, they do not; they have their feet upon the ground, and their heads towards the sky. The trees, plants, houses, and all, are the right end upwards. They cannot possibly fall into the sky; it would be nonsense to say such a thing.

The air we breathe in entirely surrounds the earth, in the same manner as the peel surrounds an orange, or the shell a nut: but it is so thin that you cannot see it. You know that chocolate is not so thin by a vast deal as water, and water is a great deal thicker than air; for we can see that, but cannot see air. If it were not so very thin, we could not breathe in it. Every time we fetch our breath, we draw in fresh air: if we drew in water in that manner, it would drown us. When we draw in fresh air we throw out that

which is become hot by having been in our body. Convince yourself of what I say: put your hand to your mouth, and draw your breath; does it not come out warm? but the open air feels cool to your face. If there was no air we could not live, and if we could live we should not be able to breathe: it is of use to us in an hundred respects, being necessary for the preservation of all living creatures in the world. Even the fishes have air-bladders, which are of infinite use to them. The trees and plants in general would die without air, and we should have no winds, which you know are very useful, as I told you before in respect to blowing the ships along, and driving the clouds about, so that they may break and fall in different places on the dry land, instead of returning back to the sea, from whence the sun draws the vapours that form them.

The wind is a great stream of air; and though it sometimes does mischief, yet it is of infinite use, as the air would become extremely unwholesome if it were to remain still and motionless.

Now I have made you turn your thoughts to the sky, I must not forget the moon, for that is a very beneficial thing to us. She is not a globe of fire, like the sun, but supposed to be like the earth we live in. All the light she has is borrowed from the sun, for the light goes from him to the moon, as it comes down to us, and the inhabitants, if there be any living on the outside, as we do, see the light in the same manner, and in all probability enjoy equal advantages with us, from his warm, refreshing beams. Could we be removed thither, our earth would appear to us like the moon, only larger. The moon and earth are both so large and thick that the sun cannot shine through them, but only make them look bright, as even the candle will do any thing that it shines upon, which could not be seen in darkness.

Take this gold watch, put it in a dark place, and it will not be seen; let the candle shine upon it, and it will appear very bright, because it receives the light; so it is with the moon; we see that part light which the sun shines on. Sometimes it is but a very little crescent, at other times a full round moon. The sun always shines upon half of it at once; but it happens that part of that half may be turned from us. I can make you understand this better by the globe than from any description.

We will suppose it to be the moon, the candle

he sun, and your little round head, Henry, to be the world. Now you see the whole of the light side fronts you, but move the globe a little from the place it now stands in, or move yourself, and part of the dark side will be towards you. We can see no more of the room than that piece of the enlightened part which fronts us, that is like a half moon. Go round to the other side, and you will see there is no light shining on it: it appears very different from the other: and you would not see it at all, only that the whole room is enlightened by the candle; but in respect to the moon itself, you can see no part of that which the sun does not shine upon any more than you would see this globe if the candle was taken away.

The eclipse, which you were so entertained with a little while ago, was occasioned by the shadow of the earth falling on the moon, which always happens when the earth is in a straight line between the sun and the moon. You see if I place a screen, or any thing between the candle and the wainscot, the shadow of it will be seen on the wainscot: there is the shadow of my hand; put yourself, Henry, in this place, and we shall see your shadow; that is to say, as the light cannot shine through you, you keep it from falling on that part of the wainscot which is opposite to you.

I shall say nothing to you about the other

planets, comets fixed stars, milky-way, &c. because I fear they would puzzle your little heads too much at present, for it grows very late. Henry, how have you been able to keep your little eyes open so long ? Good night !

I fear, Charlotte, that the rain will prevent our walking to-day, therefore take your work and sit down with me. If you are able to remember what I have told you lately, you have made a very considerable addition to your stock of knowledge. Do not you think, even from the slight view we have taken of the works of nature, that there must be something delightful in the pursuit of these studies ? I hope you will always have a taste for so profitable an amusement. I have as yet only sown the seeds of knowledge in your mind, but shall be happy to assist your own industry in the cultivation of them, and hope you will find the felicity of your life increased by pursuits so properly adapted to your nature.

We have examined a variety of flowers, plants, trees, &c., and find them all most wonderfully formed to answer the purposes they seem to have been designed for: likewise the elements, fire, air, earth, and water, and every thing that the earth and sea contain. Animals are still more

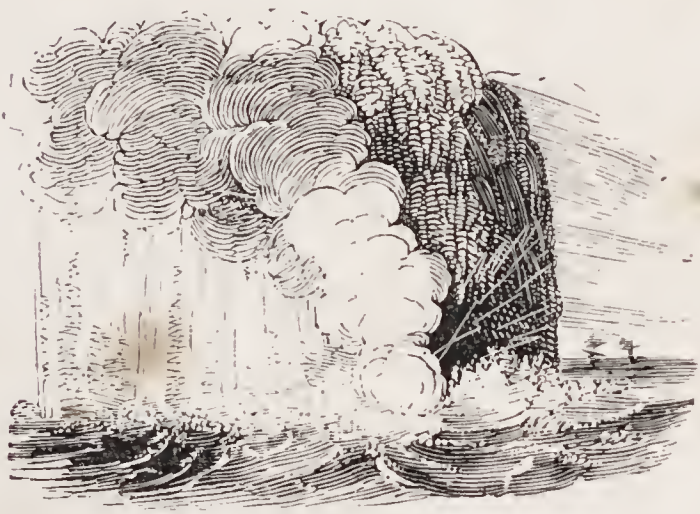
curious, and we have discovered that they are of a nature superior to vegetables, or any inanimate production of the earth: that every one is furnished with what is necessary for its subsistence, and has as much knowledge as it has occasion for, in order to perserve itself from harm, and to take care of its young, as long as they stand in need of assistance.

But you see, my dear, that there is no living creature which resembles us. Every thing appears to have been made in some measure for our use, and we are able to apply them to our purposes; therefore Man is properly called *The Lord of the creation.*

In many respects, indeed, we seem to be inferior to animals, for numbers of them exceed us in strength, swiftness, sight, hearing, smelling, and other particulars; let us therefore endeavour to find what it is that raises up above them. The subject is very important, therefore pray give me your attention, and I doubt not but you will understand me.

Man at first is a little helpless Infant, unable to assist himself in the least; and were he not nursed with the most tender and assiduous care, he would perish miserably with cold, hunger, and nakedness: what would become of little William, think you, if there were no person to clothe or take care of him?

Mount Vesuvius



Burning Springs

Mount Etna

The young of other animals have in general warm furs or feathers, are able soon to provide for themselves, and to do all that their nature requires; but it is a long while before a child can take care of himself, for he does not even know, till experience teaches him, that fire will burn, water drown him, and a thousand other things necessary for his preservation.

However, he keeps gaining strength and knowledge every day; in a short time has the use of speech, is able to distinguish one person from another, takes notice of every thing he hears, sees, or touches, and is soon superior in understanding to the most sagacious animal in the world; though still very far from possessing either the strength or knowledge of a man.

You cannot remember, Charlotte, the time when you were such a little child as William, but can recollect that you were not always so big as you are now: you, I hope, will continue to grow and learn; but do you think that Tray has grown at all, or learned any thing lately? And as for your Canary-bird, does not he sing the same notes over and over again? You may observe that there are children of various sizes; and have, even in your short life, seen those who were great boys and girls attain the height of men and women: you have seen kittens grow to

cats; puppies to dogs; chickens to fowls: in our growth then we resemble the animals, only we are a much longer time before we attain our full size.

We are like them too with respect to flesh, bones, skin, blood, eyes, ears, teeth, legs, feet, and many other particulars.

We, as well as the brutes, birds, fishes, and insects, are kept alive by eating and drinking. Our body, as well as theirs, when it has attained its full proportion, improves no more; and, in the course of a few years, when old age comes on, grows feeble, the skin shrivels, the teeth drop out, there is a visible decay of nature, which at last sinks under infirmity and dies: the body is then buried, and turns to dust and ashes; and were it to be mingled with that of dogs and cats, or the meanest of animals, could not be distinguished from them.

This would be a melancholy story if it were the whole of the history of humankind; but I hope to convince you presently, that we have something in us that never dies; for it is a certain truth, that we have souls as well as bodies, and that the soul continues to live after the body is dead.

I can describe the parts of the body to you, for they are visible to the eye; but the soul can-

not be seen. You may however soon convince yourself, that you have something in the body very different from it.

Look at the animals; they can, like us, eat, drink, walk, sleep; like them (as I said before) we must be sustained with food, or our bodies would perish. It is the body then that eats, drinks, walks, sleeps, and at last dies. Now have you not found that whilst your body was perfectly at rest, when you were sitting by yourself, that you could recollect a hundred things which you had formerly heard or seen? Cannot you contrive what you will do, even years hence perhaps? Do not you sometimes feel joy, at others, sorrow? Cannot you wish and resolve? If you see any thing in pain or distress, do not you feel compassion for it? You can understand what other people say to you, and inform them what you like or dislike; can every day learn to know something more; can say to yourself, how can such and such things be so and so? and then think about them, till perhaps, without being told, you discover what you want to be informed of. Or should it be a subject above your capacity, you can ask information of others, make them know your meaning, and understand their explanation of things.

Now these operations of the soul are greatly above what the most sagacious animal is capable

of. They just know how to provide for themselves, that is to say, to seek for food and to eat it; to take a tender care of their little ones for a certain time; and to use those weapons of defence which they are furnished with, against their natural enemies; but are no wiser at twenty years old than at twenty months.

You do not see them examining any thing in Nature any farther than to look and smell at it, in order to discover whether it is good for them to eat. You never heard them conversing together, and telling their thoughts and opinions, as mankind do; because they have not thinking souls. They have not reason; they cannot invent arts and sciences. Every bird of the same kind builds its nest alike, which shews that they do not think as we do; for if they did there would be variety in their works.

Mankind are for ever producing new and curious inventions. There is scarcely any thing in Nature but one person or other can make an ingenious use of it: for instance, what animal in the world could have made this watch? see how extremely curious the inside of it is. If I were capable of explaining its entire construction, you would not be able to understand it. Thus much you can however comprehend, that it is composed of a number of wheels and other parts: here is a delicate steel chain; there is a spring;

here a pendulum; now all these things together, when it has been wound up by the key till the chain is all wound upon that part, keep in motion till the chain gets all on this place, which is twenty-four hours. Under the glass you see is a dial-plate, with the twelve hours marked on it, and little dots between; each of which stands for a minute. There are two hands moved by the spindle which comes up in the middle; *that* is put in motion by the works withinside. These hands point out, one the hour of the day, the other the part of the hour which has elapsed at the time you look at the watch. The shortest hand only moves from one large figure to another in one hour, the other goes from twelve to twelve in the same time, which is sixty minutes, so that you may always know what time of the day or night it is by looking at the watch: indeed you have long been able to tell what it is o'clock, and therefore I shall say no more about it: but do not you think that the making such a machine required a great deal of thought and contrivance?

If we had only bodies void of thought, as the animals have, no such thing could ever have been made; no, not so much as a chair or a table: for without the power of thinking we could not have applied the creatures to our use.

Now if we think it necessary to do what we can

to nourish and preserve these bodies, which are of so perishable a nature, that they may be cut off in a moment, or, if they escape from being destroyed by diseases or accident, will most certainly decay with old age, and sink into the grave, is it not of infinite consequence to us to study what we can do for the soul, which I hope I have convinced you is so much superior to the body?

I told you that the soul shall live for ever; I can with equal truth assure you, that it depends on ourselves whether it shall be happy or miserable to all eternity, that is, for a life without end.

I have often, my dear, informed you, that there is a Divine Being called God, who made you and all things in the world; and you know I have taught you to pray to him night and morning. I forbore to say much to you concerning him, because I knew the subject was too sublime for your tender mind. I flatter myself, you are now able to understand me, and am eager to tell you of his *Goodness*. Young as you are, I think I can *convince* you that there is really a God.

Suppose you had found a watch, discovered its use, and how admirably it was adapted to serve the purpose, could you suppose that it had made itself?

Should you look at a house, could you imagine that it grew out of the ground, when you have seen carpenters, bricklayers, and other artificers employed in building it? Now what must you think of the world and its productions, of which you know we have lately taken a general view?

It is not in the power of the wisest man in the world to make even a blade of grass, and still less must be expected from the animals, which, as I have shewn, are inferior to us. It is evident from the construction of every part of Nature, from the noblest to the most insignificant, that they are all admirably formed, they must therefore have been the work of some wise, powerful BEING, infinitely our superior. We can no otherwise account for our existence than by supposing that we are likewise the work of his hand, for we know we did not create ourselves, nor have we yet met with any creature that could form us.

As we did not make ourselves, neither can we preserve our lives. And even our reason, which so eminently distinguishes us above all other creatures in the world, would be of no use towards supplying our bodily wants, unless the world had been furnished with materials to exercise it with: but the world affords us all we want; ALMIGHTY GOD has been pleased so to

construct it that it furnishes sustenance for all the living creatures it contains; but none have so large a share of its blessings as mankind. We therefore are certainly bound to be thankful to our gracious Creator, for the innumerable benefits he has bestowed on us, but how shall we find a way to please him?

Do not you think, Charlotte, that it would be a happy thing if God would vouchsafe to publish his will to mankind, and teach us the duties he requires us to perform? This, my dear, he has done. The BIBLE contains all that is necessary for us to know and practise, and is truly called the *Word of* GOD, though penned by men.

The first five books were written by Moses, and I purpose to tell you how he came to write them; but shall not relate his whole history, as you will shortly read it in the scriptures; only I am desirous of convincing you that Moses was *commanded* by the ALMIGHTY *to write it.*

The people of Israel had for a considerable time been treated in the most oppressive manner by the Egyptians, as you will read in the BIBLE, where you will also learn how they came to be in Egypt.

GOD ALMIGHTY saw the cruelty that was exer-

cised upon them by command of Pharaoh the king, and as he was a very wicked man, resolved to make such an example of him, as should serve for a lesson to all succeeding generations; and at the same time to perform such wonderful works, as should convince all who heard them related, that his almighty power is able to do whatsoever pleaseth him; and that as he made all things at first, they are still subject to his will, and he can reward the good, and punish the wicked, in the most astonishing manner.

Moses was looking after the sheep of his father-in-law on the mountain of Horeb, when suddenly the LORD appeared to him in a flame of fire, in the midst of a bush, and the bush burned with fire, and was not consumed. Moses knew that it was the nature of fire to destroy wood, therefore he said, "I will now turn aside, and see this great sight, why the bush is not burnt." And when the LORD saw that he turned aside to see, he called unto him out of the midst of the bush, and said, "Draw not nigh hither, for the place whereon thou standest is holy ground," and Moses hid his face, for he was afraid to look upon GOD.

The uncommon appearance of a bush burning with fire, without being consumed, and the awful voice which he heard, struck him with reverence, so that he dared not continue to look

towards the place, fearing he should not be able to bear the sight of so much glory, as seemed to be breaking in upon him.

The great GOD himself, my dear Charlotte, is of a nature so infinitely superior to ours, that whilst we are in the body, we cannot possibly see him, but we may know by his works (those wonderful works which I have latety been endeavouring to make you in some measure acquainted with) that he is present every where, and knows all things. But as they are always before our eyes, we are apt to overlook his hand, therefore when the ALMIGHTY had any particular purpose in shewing his power or goodness, it was usual for him to make his presence *evident* by some extraordinary appearance which should awaken their attention and prepare them to receive and execute his commands; sometimes by a bright and sudden glory in the heavens, often by altering the course of nature; sometimes by sending his holy Angels, or good men called Prophets, to make his will known to mankind.

When the LORD had, by his glory, manifested himself to Moses, he commanded him to go to the people of Israel, and tell them that he would shortly deliver them from their present afflictions,

and lead them into a land of plenty and happiness; and that he should likewise go to Pharaoh, and request him to let the people go, that they might serve the LORD; for they dared not to serve him publicly in that land, as their fathers had done, because the Egyptians would have killed them for it.

And Moses said, "Who am I that I should go unto Pharaoh, and that I should bring the children of Israel out of Egypt?" for he was a man who had a very humble opinion of his own abilities. And God said, "Certainly I will be with thee." Moses was still apprehensive, that *his* word would not be taken on so important a subject, therefore GOD vouchsafed to give him an immediate proof, that he would grant him the means of convincing them of his veracity, by performing such wonderful things as none but the *Almighty Power* could effect; for he commanded him to cast to the ground a little rod which he held in his hand, and it immediately became a serpent; and he was ready to flee from it, when the LORD commanded him to take it by the tail, and it became a rod again.

Then the LORD commanded him to put his hand into his bosom and pluck it out, when he found it covered with a leprosy, which was a filthy disease, very difficult to cure; but on his thrusting it into his bosom and taking it out

again it recovered, and was as clear as his other flesh.

Then the LORD commanded Moses to go and do the same before the children of Israel, and if they were not sufficiently convinced by these miracles that he came on *God's errand*, to take some of the water out of the river, and pour it upon dry land, and it should immediately become blood.

But notwithstanding that Moses was sensible of the *immediate presence* of GOD, and saw such proofs of his *power*, he could not get the better of the timidity of his temper, and was still apprehensive that he should not gain credit from the Israelites, because he said he was slow of speech. But the LORD said, "Who maketh the dumb, or deaf, or seeing, or hearing, do not I, the LORD? Now therefore go, and I will be with thy mouth, and teach thee what thou shalt say:" but Moses continued to entreat the LORD that another person might be sent; he was therefore permitted to take Aaron his brother, and the LORD promised to put words in their mouths, and teach them what they should do.

Then GOD commanded Aaron, who was at a distant place, to go and meet his brother, who was rejoiced to see him; so they went together, and assembled the principal persons amongst the Israelites, when Aaron spake the words

which the LORD had spoken unto Moses, and they wrought the signs of turning the rod into a serpent, and the hand becoming leprous, before all the people, who believed; and when they heard that the LORD had seen their affliction, they bowed their heads and worshipped; and their hearts overflowed with thankfulness, hope, and joy.

Afterwards Moses and Aaron went and told Pharaoh that the LORD GOD required that the people of Israel might be permitted to go and serve him in the wilderness; but Pharaoh said, "Who is the LORD, that I should obey his voice to let Israel go? I know not the LORD, neither will I let Israel go:" and he reproved Moses and Aaron for hindering the people from their work, and laid severer tasks on them than before. GOD ALMIGHTY permitted him to do so, that the deliverance he was going to bring about might appear the greater.

The people however were extremely dejected, and began to reproach Moses and Aaron as the authors of these new calamities; and Moses complained to the LORD, that since he had been in to speak unto Pharaoh he had done more evil to the people, and that they were not delivered at all.

They had already seen sufficient to convince them, that GOD was able to perform his promise;

and the history of their forefathers, Abraham, Isaac, and Jacob, abounded with instances of his loving-kindness towards those who put their trust in him: therefore it was a great crime in them to doubt; but it pleased the ALMIGHTY to continue his favour to them notwithstanding and he commanded Moses to return again, and desire Pharaoh to let them go, and if he required a sign that the LORD had sent them, Moses should take his rod, and it should become a serpent; and they did so; but he hearkened not unto them; they therefore departed, and the next day went to him again; when, as the LORD commanded him, Aaron stretched forth his rod over the waters of Egypt, and all the river, and every stream of water became blood; likewise all that was in vessels of wood and stone in their houses, so that the Egyptians could not drink of the water of the land, and were greatly distressed.

This did not turn the obdurate heart of Pharaoh; for when Moses came again to demand leave for the Israelites to depart, he still refused. So Moses and Aaron were ordered to repeat the demand from day to day; and GOD constantly wrought some great miracle to testify that they were commissioned by him.

But you will read the account of them very shortly yourself in the Bible. I shall therefore

only say at present, that Pharaoh was at last so terrified, that he was urgent for their departure, but did not believe and repent; for no sooner were they gone than he determined to pursue them, and accordingly gathered his army together, and followed them.

In order to encourage the Israelites to put their trust in him, the LORD GOD made his PRESENCE *visible to them* in a remarkable cloud by day, and a pillar of fire by night; which in the beginning went before to direct their journey; but when they were in danger of being overtaken by the enemy, removed and stood behind them, and was a light by night to the Israelites, but to the Egyptians a cloud of darkness. Pharaoh and his host overtook them at the Red Sea, and there they must have been entirely destroyed, but that the LORD continued to perform his wonders for them. Moses stretched forth his rod, and GOD caused the sea to go back by a strong wind, and made a path of dry land in the midst of the waters, through which the Israelites passed safely, having the waters like a wall on the right-hand and on the left; but as soon as Pharaoh and his host were got into the midst of the sea, the LORD said unto Moses, "stretch forth thy rod," which he did, and the waters closed in on the Egyptians, and they were all drowned.

I shall not now relate to you, my dear Charlotte, what afterwards befel the Israelites. What I have told you was with a view to shew you, before you begin to read the Holy Scriptures, that the writer of the first part of them was really no common writer, but was commissioned of God to inform the Israelites of their origin, and to communicate a set of laws which they were to obey in order to please him.

After a great variety of events the Lord commanded Moses to go up to mount Sinai, and there he told him to write the two tables of laws which are still called the Commandments, and make a part of our duty at this time. You know them by heart, and I shall soon explain them to you.

Moses wrote his five books, called Genesis, Exodus, Leviticus, Numbers, Deuteronomy, during the lives of the persons who had been so miraculously delivered; therefore, had they not been strictly true, they could not possibly have gained credit; for how could any man persuade such a multitude to think that they had been delivered from bondage, passed through the midst of the sea, heard the voice of God speaking unto them in thunder, beheld his glory, which so greatly affected them that they entreated not to see it a second time, lest they should die: could, I say, any man in his senses have been prevailed

en to let those things pass for truth if he knew them to be false; and would they have been persuaded to set apart particular days in the year in remembrance of what had never happened? Now, it is most certain, that the Israelites did believe the relations of Moses, observed the laws he gave them, and commemorated the mercies they had received, and taught their children to do the same, with their reasons for doing so. Many of these laws and ceremonies are kept by the Jews (who are descendants of the Israelites) to this very day, and will continue to be so till they all become Christians.

I have much to say to you concerning the Jews, but shall be better understood when you read in the Scriptures who they were. To morrow you shall begin to read the Holy Bible, and I hope you will daily increase in the knowledge of God, and ever continue his true and faithful servant, and then you will be entitled, through his infinite goodness and mercy, to a never-ending life of perfect joy and happiness.

ANECDOTES OF BIRDS.

BY S. C. HALL.

Of all the classes of creation, birds are peculiarly calculated to engage the attention, and excite the admiration of the human kind. To them we are indebted for sweetness of song, and we might have remained ignorant of the divine and delightful powers of harmony, had we never heard the nightingale's plaint, the lark's exulting hymn of liberty, or the blackbird's merry whistle, that sweetest solace of the ploughman's labors.

It is not too much to say, that some of the most exquisite and elevated endowments of the mind have been called into action by the wing of a falcon, or the warbling of a wood-lark.

Wings are among the most enviable gifts with which nature has enriched the animated world. With brutes, man is, in this respect, on a level. Like them, we may scale the Alps to the highest summit—we may ascend Mont Blanc, and build upon its loftiest pinnacle a wooden certificate of our courage and perseverance—to be blown away the next hour. But what does all this amount to? We learn that thus far only can we go, and that nothing remains but to descend

again as rapidly as possible. We can, to be sure, mount in balloons, and rise a certain number of feet above St. Paul's; but we know, all the while, that the very tomtits are laughing at and ridiculing our worse than Icarian ambition. Fishes, even those that fly, we are little disposed to envy; we covet not their coral bowers and palaces of pearl, being perfectly satisfied with the descriptions furnished by our poets;—we consign them to their watery delights without a sigh. Notwithstanding the powers of flight extended to many insects, we cannot condescend to be jealous of them. Whether from the multiplicity of their legs, the fragility of their structure, their personal insignificance, ephemeral duration, or pantomimical changes, we know not; but assuredly we would *not* be a butterfly, though we might nestle on roses, or sip dew from the lily's bosom. We would not change existence with an oak, crowned as it is by centuries as with a garland—though it were to be the pride of Windsor forest, and the favourite of a line of kings:—nor with a diamond, to hang from the ear of England's queen, or sparkle on the inspired brow of England's fairest poetess. But when we behold a bird migrating hither and thither—now coming out into the bright blue of summer skies, and anon scudding away beneath the broad shadow of a soberer season—enjoying the

earth and exulting in heaven—sheltering itself under a curling leaf, or wandering through a wilderness of cloud;—we cannot behold this without looking with an air of respect and defference, even upon the sparrow. We regard him as a being of a superior world—as a little fairy creature, who is secretly pitying our limited accomplishments and imperfect organization. We throw him the crumbs with a less confident hand; and wonder how they can tempt him from his balmy and beautiful retreat. It is here that the superiority even of the sparrow is discoverable: he excels us in the most delightful of all privileges—that of ascending into the air. The highest attainment of human genius cannot reach this.

Gifted with such important and peculiar powers, no one can wonder then that birds are universally cherished and admired. They bring to earth, upon their wings, some of the pleasures and purity of the scenes amid which they revel. And their voices, even in the captivity of a city, burst forth a token of joyfulness, and health, and love, to those who listen.

The history of birds supplies us with numberless subjects for reflection. The student in ornithology daily derives some lesson of morality from apparent insignificant objects. When he hears of the kingfisher, exposing to the heat-

ing and brilliant rays of the sun the glowing colours of his chest, fluttering over the stream so as to attract its finny victims to the surface by its beauty, that it may the more easily secure them as his prey—he is, or ought to be, reminded of the snares that are perpetually dazzling and deceiving us in life—of the graceful motions, and gaudy hues, that serve to hide the workings of deception and vice—and, above all, how often the most brilliant talents have been employed to ensnare, where Nature intended them to delight and adorn. When he beholds the bittern standing, hour after hour, in the same attitude, mute and motionless, by the margin of a pool—waiting for its prey—its feathers sleek, its eyes fixed, and its whole appearance that of devout meekness and patient serenity—he compares it with the examples of duplicity and selfishness, of cunning and hypocrisy, with which history and experience have furnished him, and as he turns aside in disgust, acknowledges the similitude to be painfully true. Upon this topic, however, I will leave my juvenile readers to enlarge. Their imaginations will find ample scope; the subject is almost inexhaustible: but my business is with facts rather than fancies.

A limited space must prevent my entering upon the various interesting features connected

with this beautiful branch of Natural History: to my young friends who study Ornithology, as a mere science, my simple ANECDOTES OF A FEW BIRDS cannot prove as interesting as to others who delight in observing and noting their various instincts and actions.

They must all be aware, however, that the great naturalist, Linnæus, has divided birds into SIX CLASSES; and, though more modern naturalists have altered this division, I prefer adhering to it as the most simple, and least likely to confuse the young student.

I shall, then, introduce to your notice the eagle, a bird of the *first* or RAPACIOUS CLASS, so called because they prey upon flesh of all kinds. It consists of many varieties—the most prominent of which are the golden eagle, "with his eye of light"—the conder, of whom so many wonders are told in fairy tale—the unseemly and rapacious vulture—the gallant falcon, which, in the olden days, afforded such gay pastime to lords and ladies—the midnight owl—and the small butcher-dird. The great sea-eagle is only inferior in size to the golden eagle: as its name implies, it resides near the sea, although its eyrie, or nest, is generally constructed in the loftiest tree it can discover in the vicinity of ocean: there it builds a very broad habitation, and lays in it two eggs. I remember a pair of these birds

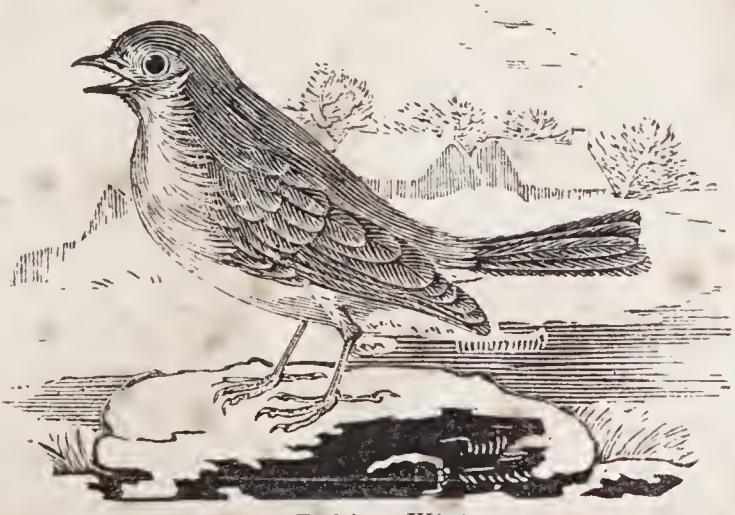
who had inhabited, time out of mind, an old tree in my neighbourhood; I have often gazed up with wonder at the immense mass which their nest appeared as it rested on the topmost and blighted boughs of this denizen of the woods; and I recollect well the heavy sailing flights of its inmates returning to their home. The peasants there used to assert that they fished more in the night than in the day, and naturalists generally agree in the opinion that they certainly collect food when others of the species sleep. I often lamented the fate of those birds; latterly, perhaps from their age, which must have been extreme, they became heavy and lazy—so lazy that they debased their noble nature by condescending to petty pillage that would have disgraced a common kite, and the peasants were continually suffering from their ungenerous system. They seldom visited the sea-shore, but woe betide even an unfortunate chicken that crossed their path! What was to be done? Many projects were talked about, but, with the dilatoriness peculiar to my country-folk, none were put in execution; every body respected the eagles. Our gardener, Peter, was ordered to prime and load his musket, and fire on the old lady the first time she intruded herself into the company of our goslings. She was a magnificent bird, and, as is usual with females of the

rapacious tribe, half as large again as her husband. "Look at her," replied Peter, as she sailed in the distance, the deep blue of a summer sky throwing her expanded wings and majestic movements into strong relief. "Look at her, master! I remember that *ould* lass ever since I was the hoight of a rasberry plant; and I could not find it in my heart to hurt a feather of her wing—the craythur! What signifies a dozen of goslings to such a bird as that?—won't there be plenty o' geese of all sorts when she's gone? But my father before me used to say, Peter, says he, mark my words—them 'ill be the last o' the rale ancient Irish eagles that 'ill ever settle in the barony—for they've a mortal hatred to new fashions, and prefar, by a great dale, an open country, where there's a free trade, and no revenue-officers, or any thing that way:—you understand, sir;—but as to killing her—I'd as soon think o' killing the priest!"

This was the climax!—Peter's determination was taken; but, as goslings were again destroyed, and, unfortunately, in an unlucky moment, the rapacious bird took a fancy to a beautiful pea-hen, who was brooding over her eggs in a retired copse, it was absolutely determined that, as it would be a species of sacrilege to destroy the birds, the old tree, so long their domicile, should be cut down; and it was conjectured

Golden Eagle

Coursing



The Robin—*Winter*.

that they would, on receiving so marked an insult, proudly resolve to quit the neighbourhood altogether. The result proved that our anticipations were correct. When they returned at night, and saw the dwelling of ages scattered on the ground, they circled and circled over it, uttering, from time to time, screams both shrill and plaintive. In the morning they were no where to be found, and we could only conjecture that they had retired to some of the islet bays, with which that part of the coast abounds.

I once saw a poor Irishman, who assured me that he had robbed an eagle's nest, at Killarney, of a fine young lamb, which kept his family in fresh meat (a luxury they were quite unaccustomed to) for more than a week! He was not as clever, though, as a man we read of in "Smith's History of Kerry," who got a comfortable subsistence for his family, during a summer of fearful famine, out of an eagle's nest, by robbing the eaglets of their food, which was plentifully supplied by the old ones; he protracted their assiduity beyond the usual time, by clipping the wings and retarding the flight of the young. We may call the eagle the lion of the air: like that noble animal, he is solitary in his habits, lonely in his magnificence, disdaining all the attributes of royalty, except its POWER—in *that* he triumphs. How good and wise is Providence in all its ways!

Were carnivorous birds as numerous as others, how soon all the humbler tenants of the air, and the helpless, but beautiful and gentle, creatures of the woods and wilds would be destroyed.

Although the falcon is a cruel and a voracious bird, it is interesting because of the sport it afforded our ancestors. It must have been a gallant sight to see lords and ladies, so gaily mounted, watching the course their brave birds took in the sky, to strike a heron, or some simpler prey; and I regret that my limited space prevents my recording a few interesting anecdotes of this sagacious bird. If my young friends should, at some future period, feel interested in this sport of the olden time, they will find abundant information in Sir John Sebright's Observations on Hawking.

Have you ever been terrified at night by the hooting of the midnight owl? Or have you ever been near enough to one to examine its peculiar eyes—the distinguishing mark of the tribe? They are wisely formed for seeing better in the dusk than in the broad glare of sunshine, because they take their prey at night. I wish you particularly to observe that, in the eyes of all creatures, nature has made a provision either to shut out too much light, or to admit what is necessary, by the contraction and dilatation of what is termed the *pupil*. In these birds the

pupil is capable of opening very wide or shutting very close. By *contracting* the pupil, the light which would act too powerfully, on the sensibility of what is termed the retina, is excluded; by *dilating* the pupil, the animal takes in the more faint rays of light, and thereby is enabled to spy its prey, and catch it with greater facility in the dark. The owl sits "hooting the moon," amidst tombs and ruins, and appears offended even at the twinkling stars.

The *second* class consists of BIRDS OF THE POULTRY KIND—those excellent and domestic things to which we are indebted for so many comforts—so many luxuries. The gaudy peacock, the speckled guinea-hen, who proclaims every coming shower in loud and shrill announcement, the graceful pheasant, the inflated turkey-cock, that dread of bold children and beggars, the gentle partridge, and others, "too numerous to mention," all belong to this useful family: but, much as I admire the beautiful peacock, and his gentle, lady-like mother and wives, I confess that my friendship and esteem centre in common barn-door fowl. I had once a favourite black hen, "a great beauty," she was called by every one, and so I thought her; her feathers were so jetty, and her topping so white and full!—she knew my voice as well as any dog, and used to run cackling and bustling to my

hand to receive the crumbs that I never failed to collect from the breakfast-table for "Yarico"—so she was called. Yarico, when about a year old, brought forth a respectable family of chickens, little, cowering, timid things at first, but in due time they became fine chubby ones; and old Norna, the hen-wife, said, "If I could only keep Yarico out of the copse it would do, but the copse is full of weazels, and I am sure of foxes also. I have driven her back twenty times, but she watches till some one goes out of the gate, and then she's off again; it's always the way with young hens, miss—they think they know better than their keepers; and nothing cures them but losing a brood or two of chickens." I have often thought, since, that young people, as well as young hens, buy their experience equally dear. One morning I went with my crumbs to seek out my favourite, in the poultry-yard; plenty of hens were there, but no Yarico; the gate was open, and, as I concluded, she had sought the forbidden copse. I proceeded there, accompanied by the yard-mastiff, a noble fellow, steady and sagacious as a judge: at the end of a ragged lane, flanked on one side by a quick-set hedge, on the other by a wild common, what was called the copse commenced; but before I arrived near the spot, I heard a loud and tremendous cackling, and met two young long-legged

pullets, running with both wings and feet towards home. Jock pricked up his sharp ears, and would have set off at full gallop to the copse, but I restrained him, hastening onward, however, at the top of my speed, thinking that I had as good a right to see what was the matter as Jock.

Poor Yarico! An impertinent fox-cub had attempted to carry off one of her children, but she had managed to get them behind her in the hedge, and venturing boldly forth had placed herself in front, and, positively kept the impudent animal at bay; his desire for plunder had prevented his noticing our approach, and Jock soon made him feel the superiority of an English mastiff over a cub-fox.

The most interesting portion of my tale is to come. Yarico not only never afterwards ventured to the copse, but formed a strong friendship for the dog who preserved her family. Whenever he appeared in the yard she would run to meet him, prating and clucking all the time, and impeding his progress by walking between his legs, to his no small annoyance. If any other dog entered the yard she would fly at him most furiously, thinking, perhaps, that he would injure her chickens; but she evidently considered Jock her especial protector, and treated him accordingly. It was very droll to see the peculiar look with which he regarded his feathered friend, not

exactly knowing what to make of her civilities, and doubting how they should be received. When her family were educated and able to do without her care, she was a frequent visitor at Jock's kennel, and would, if permitted, roost there at night, instead of returning with the rest of the poultry to the hen-house. Yarico certainly was a most grateful and interesting bird.

I wish the silver pheasant were introduced into our poultry-yards. It is a most graceful, beautiful bird, originally imported from China; more easily tamed than the common pheasant, and bearing our climate well. Its eggs are rather small, but well-flavoured. The lady is not as handsome as the gentleman, but then she makes up for this deficiency by being gentle and amiable; these qualities more than compensate (in the opinion of her intimate friends,) for her lack of personal beauty.

What amusement feeding poultry affords young folk in the country!—how pleasing it is to see them run after the little lady or gentleman, who, basket on arm, showers upon them the "golden grain!"—the duck's quack, the hen's cackle, the guineafowl's deep and peculiar note, the "gee-gee" of the respectable geese, and the gentle treble of the pea-hens, as they stride forward, attended by their stately lord, whose magnificent tail seems as much in his own, and the way of

others, as a young lady's train on her first presentation at court.

Most children say that the peacock thinks his ugly legs spoil his appearance; they are black and thick, I confess, and do not correspond with his beautiful tail; but they are strong useful props, for all that, as the following anecdote will testify, and therefore must not be despised. A fine full-grown peacock was seen upon a half-finished hay-stack in the Wottingham meadows. The owner of the stack did not like the bird to remain there, and sent up his son, a little boy, to drive him down; he, in so doing, took hold of the bird's legs, which no sooner perceived itself seized, in this manner, than it spread out its wings and flew away, carrying the boy with it, like an immense tail to a kite, and so conveyed him to a considerable distance—unhurt and undismayed!

To give my little friends an idea of the manner in which wild turkeys are caught in the American woods, I must tell them that the dog and the stick must be fatal to some of the birds, who display their tails in fancied security, while the fowler lays in wait for the proper opportunity of pouncing upon them. Mr. Audubon, to whom we are indebted for so much knowledge respecting American ornithology, has, in his beautiful work, given magnificent figures of the

wild turkey. It is a most splendid bird, much superior to our gobbling acquaintances of England. M. Buonaparte relates, that a gentleman in West Chester country, New York, had once a young female wild turkey domesticated among his poultry. She disappeared, but returned in the autumn, followed by a large brood, and remained on the farm till the renewal of spring, when she again disappeared: but again came back, in autumn, with a second brood. You see she wished her young ones to be comfortably provided for!

The wild partridge is a most excellent parent, and is more sagacious than most birds of the poultry kind. As they live in the very neighbourhood of their enemies, nature has given them talent superior to birds of the larger kind—another proof of the wisdom of God. whenever a dog approaches their nest, the female uses every means to draw him away. She keeps just before him, pretends to be incapable of flying, just hops up, and then falls down before him; but never goes off so far as to discourage her pursuer. At length, when she has drawn him entirely away from her secret treasure, she at once takes wing, and fairly leaves him to gaze after her in despair. When the danger is over, and the dog wit' 'rawn, she then calls her young, who, like good children, assemble at once at her

cry, and obediently follow where she leads them. Goldsmith, in his Animated Nature, asserts that those birds cannot be tamed; but I believe there are very few created things that cannot be subdued by kindness. A mower in the country accidentally cut off the head of a poor partridge, who was sitting on her nest. He brought me six of the eggs, and I prevailed on Norna to place them under a sitting hen. In due time we had five young ones, three of whom lived to be full-grown birds; and, though permitted to ramble in the domain, always came to the poultry-yard for their food, and were quite as tame as domestic fowls in general.

I will now introduce you to some members of another and a very different family—class the *third*—the saucy, noisy, and impertinent BIRDS OF THE PIE KIND: comprising a most irregular tribe, not formidable, and yet delighting in mischief—not useful nor obedient, and yet without decided enmity to their fellow-birds. The sagacious raven—the noisy crow—the loquacious and powdered daw—the impertinent magpie—the tapping woodpecker—the beautiful bird of paradise—the echoing cuckoo—the intelligent parrot, the domestic pigeon, and gentle dove—all, with many more, belong to this miscellaneous but most interesting class. Naturalists had good reasons, of course, for making out a relationship

between "pigeons and crows," and yet I confess that they have few things in common, except their wings. The pigeon serves to unite, in nature's beautiful and harmonious chain (every link of which is perfect) the pie and the sparrow tribes. The pie class, however, form good and tender parents, faithful and affectionate mates, and many of those who live in communities are excellent neighbours. I state this, nevertheless, with reservation, having witnessed many bitter battles, between crows, in the nesting-time, for a favourite stick or situation. However, relatives are often very dissimilar. Mrs. Howitt kindly communicated to me the two following anecdotes of parrots, which I, parrot like, repeat for the amusement of my young friends: and the raven and jackdaw adventures, which follow, as belonging to the same class, will also be found interesting

One could almost believe the parrot had intellect, when he keeps up the conversation so spiritedly; and it certainly is singular to observe how accurately a well-trained bird will apply his knowledge. A friend of mine knew one that had been taught many sentences; thus—"Sally, Poll wants her breakfast!"—"Sally, Poll wants her tea!"—but she never mistook the one for the other; breakfast was invariably demanded in the morning, and tea in the afternoon: and she

always hailed her master, but no one else, by "How do you do, Mr. A.?" She was a most amusing bird, and could whistle dogs, which she had great pleasure in doing. She would drop bread out of her cage as she hung at the street-door, and whistle a number about her, and then, just as they were going to possess themselves of her bounty, utter a shrill scream of—"Get out, dogs!" with such vehemence and authority, as dispersed the assembled company without a morsel, to her infinite delight.

I have heard of another parrot, too, that was caught up by an eagle. The parrot, in its ignorance, was quite amused at such a unique mode of conveyance, and seeing the old gardener, who had lost most of his hair, at work, exclaimed, "Bald-pate, I ride—I ride!" "Yes," replied the old man, slowly raising himself—"yes, yes, and you'll pay for it!" The story goes on farther to say, that the gardener, no way offended by the bird's uncourteous mode of address, followed the eagle to the next field, where he alighted with his prey, and there actually rescued the parrot just as the eagle began to strip him of his feathers; by which time, we may presume, the saucy bird had learned that it was not the pleasantest thing in the world to ride with an eagle.

The raven, too, is a bird of humour and sagacity. There was one kept a few years ago at

Newhaven—an inn on the road between Buxton and Ashbourn. This bird had been taught to call the poultry when they were fed, and could do it very well, too. One day, the table was being set out for the coach-passengers' dinner; the cloth was laid, with the knives and forks, spoons, mats, and bread, and in that state it was left for some time, the room-door being shut, but the window open. The raven had watched the operation very quietly, and, we may suppose, felt a strong ambition to do the like. When the coach was about arriving, and dinner was carried in, behold, the whole paraphernalia of the dinner-table had vanished! It was a moment of consternation!—silver spoons, knives, forks, all gone! But what was the surprise and amusement to see, through the open window, upon a heap of rubbish in the yard, the whole array very carefully set out, and the raven performing the honours of the table to a numerous company of poultry, which he had summoned about him, and was very consequentially regaling with bread.

There is a story, and which I believe is fact, of two boys going to take a jackdaw's nest from a hole under the belfrey-window in the tower of All Saints' Church, Derby. As it was impossible to reach it standing within the building, and equally impossible to ascend to that height from without, they resolved to put a plank through the

window, and, while the heavier boy secured its balance by sitting on the end within, the lighter boy was to fix himself on the opposite end, and from that perilous situation to reach the object of their desire. So far the scheme answered. The little fellow took the nest, and, finding in it five fledged young birds, announced the news to his companion. "Five, are there ?" replied he; "then I'll have three." "Nay," exclaimed the other, indignantly, "I run all the danger, and I'll have the three." "You shall not!" still maintained the boy, in the inside,—"you shall not! Promise me three, or I'll drop you!" "Drop me if you please," replied the little hero, "but I'll promise you no more than two;" upon which his companion slipped off the plank. Up tilted the end, and down went the boy, upwards of a hundred feet, to the ground. The little fellow, at the moment of his fall, was holding his prize by their legs, three in one hand, and two in the other; and they, finding themselves descending, fluttered out their pinions instinctively. The boy, too, had on a stout carter's frock, secured round the neck, which, filling with air from beneath, buoyed him up like a balloon, and he descended smoothly to the ground; when, looking up, he exclaimed to his companion, "Now you shall have none!" and ran away, sound in every limb, to the astonishment of the inhabitants, who, with

inconceivable horror, had witnessed his descent. —It is well known that the cuckoo does not build a nest for itself, but uses the nests of other birds to deposit its eggs in, and moreover sucks theirs into the bargain. From these causes we may suppose it is that they are so ill-esteemed among their feathered brethren, and universally scouted like birds of prey. It is curious to see with what animosity a little mob will pursue one of these birds, screaming, and chattering, and scolding, in their various dialects, till the culprit is completely confounded, and hides his head in any hole or corner that comes nearest. Mrs. Howitt, who not only *sees*, but communicates most kindly to her friends whatever she thinks will interest them, wrote me the following account of a cuckoo-chase which she had the good fortune to witness.

I was walking with a gentleman on a heath in Nottinghamshire, when we saw a bird pursued by a whole tribe of little birds. My friend immediately supposed it to be a hawk; and, seeing that it was confounded, and on the point of dropping itself for concealment into a little bush of gorze, ran forward to secure it, which he did by clapping his hat upon it, in the same way that boys take butterflies. By this time I had come up, and found him drawing on his gloves tightly, and securing his wrists from the expected attack of the hawk in its self-defence. He then carefully

lifted up the hat, and brought out, to his amazement, a poor cuckoo, that seemed frightened out of its wits, and which, making not the least resistance, turned up its eyes to our faces as if imploring mercy. As I had not seen a cuckoo before, we examined head, beak, and wings, turning it over and over again, and giving it, as the German poet Burger gave his sparrow, a terrible fright, to make it value liberty more when it got it, and to take better care of itself for the future; and then, having thus satisfied our curiosity, set it at liberty, when it flew into an old tree, and shouted "cuckoo" as long as we were in hearing, which was no doubt a self-gratulation on so good an ending to a scene which had promised to be a tragedy.

> "O cuckoo! shall I call thee bird,
> Or but a wandering voice?"

The next, or *fourth* class, I shall have the pleasure of introducing, is, perhaps, that with which my young friends are most familiar—BIRDS OF THE SPARROW KIND; comprising not merely the little familiar bird that hops every where, and seems acquainted with every thing, the cheerful brown sparrow—active, industrious, and provident—with the same unvaried note in summer's sun and winter's frost, the monotonous

yet cheerful twit, twit, twit, which even in Sloane-street awakens me at five, nay, four these early mornings:—not merely the sparrow belongs to this family, but the "blackbird and the speckled thrush;" the nightingale, lark, robin, starling, and all soft-billed singing-birds; the yellow canary, painted gold-finch, sober linnet, obstinate bullfinch, and many other hard-billed relatives; the sportive migrating swallow, that places its open nest on our chimney-tops, while the martin, of the same family, sticks hers in the eaves of houses, and arches it over head, and the maligned but innocent goat-sucker, who establishes her domicile upon the bare ground; moreover, the humming-birds—those gems of air which embellish the American landscape—all belong to this tribe.

I have enumerated a sufficient number of favourites to command the sympathies of my young friends; and I cannot avoid observing that, while man subjects the horse to the purposes of his trade and indulgence, and makes the dog not only the instrument of his pleasure, but his companion and humble friend, he takes the little singing-bird into his house to delight him with its melody, or its splendid and graceful brethren of tropical woods as an auxiliary to his luxury. I cannot, however, bear those persons who make the poor little birds toil in their cap-

tivity, even for the necessaries of life. It is a melancholy thing to see the little goldfinch dwelling in a castle-like domicile, answering the knock at his gate, and exhibiting himself as a slave of the mansion, wearing a golden chain. The heart aches to see the little creature condemned to draw up in a bucket every drop of water he drinks, and winning his bread, before he eats it, by hard labour. It is making him pay the penalty of man's transgression, which has doomed him justly to toil for his daily food. It is a joyless thing to see bears and dogs dance and perform their unnatural antics; but still more joyless is it to see these free-born, innocent little creatures, wearing out their lives in a fanciful round of occupations, which they have been taught only by suffering. The canary is a gentle and affectionate bird, and apt in acquiring accomplishments which show an extraordinary sagacity. Some allow themselves to be trussed as for the spit, suspended, and twirled round as in the act of roasting; others dance on a kind of slack-rope; others, again, dressed in a military uniform, carry a tiny musket in their claws, and perform a species of manœuvre; but, perhaps, the most extraordinary feat of this kind is a little drama performed by two of them, one of which, suffering himself to be shot at, falls down as if dead, is put into a wheelbarrow by his companion,

and wheeled away. Amusing as these feats may be, they can give but little pleasure when we reflect on the cruel means that have been used in teaching them, and which make captivity only more cruel.

But, leaving these little laborious slaves; many a bird is happy in its cage, and seems even to widen the sphere of its enjoyments by its intercourse with man—it adds friendship to the pleasures of its life. I have heard of a bullfinch which, on accidentally regaining its liberty, returned voluntarily to its prison on hearing the voice of the little maiden who had daily cared for it and conversed with it. I have seen, too, a pair of birds of the same species which interested me very much. They lived in a spacious cage, full of all accommodations, and were accustomed to hop out and partake of breakfast with their master and mistress. They fed from their hands, hopped upon their shoulders, and, turning their little heads round, looked into their faces with the most intelligent black eyes in the world:—

> "Strangers to liberty, 'tis true,
> But that delight they never knew,
> And, therefore, never missed."

The cat and they lived on perfectly amicable terms, so that the best possible understanding

existed between all the members of the family both human and brute. It happened that the mistress was suddenly taken ill and confined to her bed. The cock-bird directly missed her from the breakfast-table, showed evident uneasiness, looked enquiringly on all sides, and, by very intelligible signs, made it understood that he was troubled by her absence. In the course of the day, though he had hitherto been confined to the sitting room, and was not supposed to have further knowledge of the house, he actually made his way up stairs, discovered her chamber, and tapped at the door with his beak. On its being opened he flew to the bed, fluttered about in apparent exultation, perched upon her head, and exhibited his joy in her presence by every means in his power. He remained in the chamber during the day, and, most extraordinary, at night, instead of returning to his mate, or even selecting a perch for his accommodation, actually nestled himself upon the pillow to rest, close beside his beloved mistress. This bird was a poor singer—in fact no singer at all. It had been brought up by a stocking-maker of Nottingham, and, constantly hearing the poor man at work, had learned the disagreeable jirring sound of the machine, which it imitated most accurately. The gentleman who afterwards possessed the bird, disliking his unpleasant note,

began to teach it to sing; but, in the first place, it was requisite to break it of what it had already learned. This he did by gently striking it with a knitting-needle, and expressing his dissatisfaction, whenever it began. But the poor little creature did not live to complete its lesson—and its end was a tragical one. Its master and mistress, going from home, left their favourites to the care of the maid. The gentleman had, as he assured me, a misgiving in his mind as he left the door, that the birds would suffer, and actually returned, after having gone some distance, to reiterate his injunctions. Of course the servant promised attention; but on his return his presentiment was realized—the cage was empty, and, on enquiring, he found the birds had indeed died of neglect.

Mrs. Howitt told me that some of the happiest imprisoned birds she ever knew were kept by one Jenny Champion, a deranged woman, of a good family, in Staffordshire; and who was said, and universally believed in that part of the country, to be the "Crazy Jane" of the well-known song. Men, she said, were perfidious, and women deceitful, but she could trust in the innocence of birds.

How wonderful is that instinct by which the bird of passage performs its annual migration

But how still more wonderful is it when the bird, after its voyage of thousands of miles has been performed and new lands visited, returns to the precise window or eaves where the summer before it first enjoyed existence!—and yet such is unquestionably the fact.

Four brothers had watched, with indignation, the felonious attempts of the sparrow to possess himself of the nest of the house-martin, in which lay its young brood of four unfledged birds. The little fellows considered themselves as champions for the bird who had come over land and sea and chosen its shelter under their mother's roof. They therefore marshalled themselves with blow-guns to execute summary vengeance; but their well-meant endeavours brought destruction upon the mud-built domicile they wished to defend. Their artillery loosened the foundations, and down it came, precipitating its four little inmates to the ground. The mother of the children, good Samaritan like, replaced the little outcasts in their nest, and set it in the open window of an unoccupied chamber. The parent-birds, after the first terror was over, did not appear disconcerted by the change of situation, but hourly fed their young as usual, and testified by their unwearied twitter of pleasure the satisfaction and confidence they felt. There the young birds were duly fledged, and

from that window began their flight and entered upon life for themselves. The next spring, with the reappearance of the martins, came four, who familiarly flew into the chamber, visited all the walls, and expressed their recognition by the most clamorous twitterings of joy. They were, without question, the very birds that had been bred there the preceding year.

The starling is a bird of much intelligence. Every one remembers Sterne's little captive, that uttered incessantly the melancholy phrase, "I can't get out!" It would be an appeal to every bosom, and, made from its narrow cell in the board sunshine, would speak more than volumes on the selfish cruelty of confining one of God's free-born creatures, whose birthright is as much liberty as that of any Englishman in His Majesty's dominions. The thrush that sung at the corner of Wood-street called back to the heart of poor Susan the current of long-loved associations;—she saw, in fancy, amid the smoke and bustle of a dark city, the green trees, the morning mist, and the still mountains of her native country; and I cannot divest my mind of the belief that the poor bird, amid unquiet impulses, and desires ill-satisfied, longs for the same scenes, and pours out, in its eloquent song, a mournful apostrophe to pleasures from which it is debarred. And, after all, one's heart must

ache, on a fine summer morning, when the sky, intensely blue and lofty, seems a fit roof for the temple of the universal Father—and the larks, from imperceptible heights, are sending down the outpourings of their rejoicing hearts—and thousands of birds, upon every green tree, are filling the air with their sweet jargoning—it makes the heart ache, I say, to come at such a time fresh from the pleasant fields into the hot, dusty, and noisy street of a large town, and hear a poor captive, from the upper windows of some mechanic's garret, wailing out its sorrowful song. It casts a melancholy over one's spirit; and though, to hearts like poor Susan's, it may bring back a refreshing vision of sunshine, living waters, and green trees, and perhaps send some forth to enjoy them, yet the poor captive himself is doomed to his bondage, and, like Sterne's starling, the true burden of his song is the mournful reiteration that *he can't get out.*

(I am sure I shall be pardoned for introducing here the beautiful lines of the poet—the Poet of Nature, Wordsworth—to which the previous observations bear reference. He calls the poem, "The Reverie of Poor Susan.")

"At the corner of Wood Street, when daylight appears,
Hangs a thrush that sings loud—it has sung for three years;
Poor Susan has passed by the spot, and has heard,
In the silence of morning, the song of the bird.

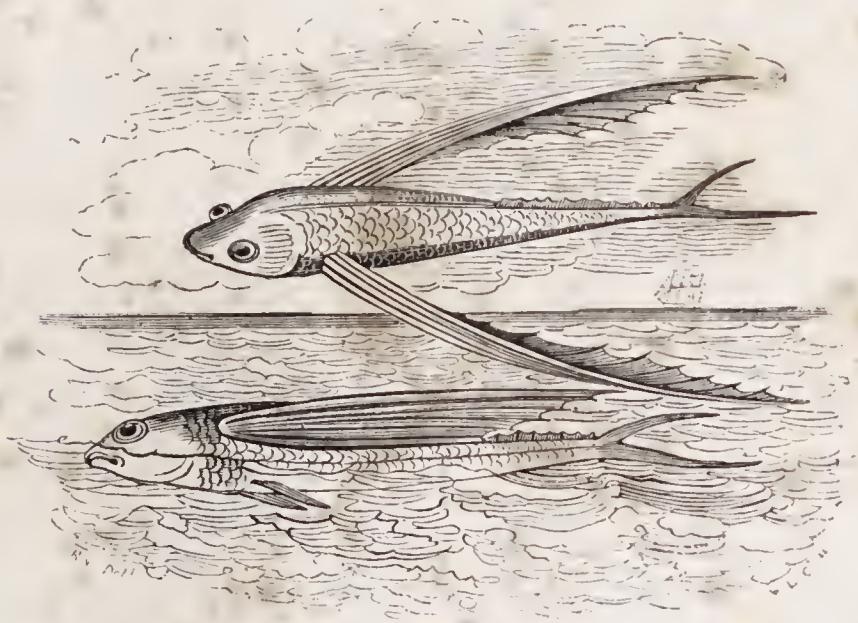
'Tis a note of enchantment: what ails her? She sees
A mountain ascending, a vision of trees;
Bright volumes of vapour through Lothbury glide,
And a river flows on through the vale of Cheapside.

Green pastures she views in the midst of the dale,
Down which she so often has tripped with her pail,
And a single small cottage, a nest like a dove's,
The only one dwelling on earth that she loves.

She looks, and her heart is in heaven: but they fade,
The mist and the river, the hill and the shade;
The stream will not flow, and the hill will not rise,
And the colours have all passed away from her eyes."

This story reminds me of a considerate old bird-fancier, who lives in a fanciful little cottage, and takes and rears many broods in the course of a year. A friend of mine was walking one Sunday evening in a woody lane near a large town, and saw coming towards him, at some distance, his old acquaintance, the bird-fancier and his wife. Presently he heard a most unusual chirping of young birds, and looked on all sides, but in vain, to discover whence the sounds proceeded. As the old couple came up, however, the mystery was unravelled. The wife carried a large basket, over which was a net, and in it were a great company of young birds, which were chirping with all their might. "My old woman and I came out," said the kind-hearted

Flying Fishes.



Flying Fishes.

man, "to get a breath of fresh air, and we have brought out all our young birds, that they, poor things, may get the same;—it will do them good."

I cannot conclude my notice of this most interesting class without introducing two anecdotes, of American birds, which I have selected out of those kindly communicated to me by my friend Dr. Edward Walsh. He had observed them during his residence in Canada. Though dissimilar in size and habits, they are only varieties of the same family.

The birds which enliven the gloom of the American forest, by their plumage or their song, had, until the appearance of M. Audubon's work been only distinguished by their predominant colours—as the red bird—the black bird—the yellow bird—the blue bird,—the snow bird, and the sealing-wax bird, the quill feathers of which are sealed, as it were, with a subtance very like red sealing-wax. These, and many more such, are sometimes to be seen in cabinets, stuffed; but, with the exception of the Virginia nightingale, few of the small birds have been brought alive to Europe.

Prior to the breaking out of hostilities, in the late war with the United States, (says the Doctor) the principal station of our army, in Upper Canada, was at Fort George. This fort

was finely situated on the northern acclivity of the Straits of Margara, which divides it from the United States. It lay fourteen miles, due east, from the falls—whose "solemn roar" lulled us to repose at night, and awoke us in the morning. A Savannah, or common, skirted two sides. The profound but placid straits glided swiftly by a third; the west side touched upon the primeval woods, whose infinite variety of trees and shrubs afforded shelter and habitation to creatures of every sort. The esplanade of Fort George was spacious. The officers' barracks, consisting of small separate houses, with each its garden, surrounded the interior; in front of these was a walk, bordered with rows of standard peach-trees, whose blossoms and fruit perfumed the air, and attracted the visits of the gay feathered people.

Being at breakfast one summer's morning, with the window open, a humming-bird flew into the room; as he boomed across my face he seemed to be living gems set in burnished gold; his eyes appeared two diamond sparks, whilst the amethyst, ruby, and emerald contended with each other in brilliancy. This is no exaggeration, as any one may conceive, who has seen preserved specimens, how much the vivid hues of the living bird surpass the faded plumage of the dead. My little visitant seemed quite at home; he poised his delicate body, which was not so large as a

cockchafer, over the tea-table, his wing quivering and vibrating so as almost to be invisible. I thought him entitled to his breakfast, and so dissolved a lump of sugar in a tea-spoon, and placed it at the further end of the table. He hovered over it, dipping in his slender bill to sip, with more familiarity than a robin. He frequently returned, and I fixed shells of syrup for him on the mantle-piece and surbase; finally he took up his domicile in the foldings of a curtain, which, on account of the heat, was twisted round the bed-post. But as pets, for the most part, come to an unfortunate end, such was the fate of our poor humming-bird; not, indeed, by cat or rat, but in consequence of my absence for a few days. He had been left in possesion, with his vessels replenished, but on my return he was found dead in the folds of the curtain. Whether he died from vexation or grief for the absence of his host cannot be ascertained. There is another probable cause—his liquid nourishment had dried up, and our little ærial gem refused to go abroad to seek it among flowers, and so died for want of it at home. We paid the last honours to his remains; he was embalmed in spices, and ultimately placed in a cabinet in London, where he may still be perceived to shine, though with diminished lustre.

There are several varieties of the humming-

bird, differing in size from that of a tom-tit to a field bee, but the smaller are the most brilliant. They are only found in America, and there they migrate at stated times of the year; for they find in the northern summers fresher verdure and a greater profusion of flowers. It is surprising that so tiny a creature should be able to undertake a flight of about a thousand miles, from the Gulf of Mexico to the Lakes of Canada. They, however, return at the approach of winter to their native warm climates.

In habits and disposition, the humming-bird resembles our robin red-breast;—like him he is extremely vindictive, quarrelsome, and unsocial with other birds. On some fancied insult, he will attack a bird ten times as large as himself—fasten on his back and peck at him with his sharp bill, like a cambric needle, until he thinks he is sufficiently punished. He will not be restrained within the limits of a cage, but will kill himself against the wires; yet, if he has free ingress and egress, he will be punctual in his visits. He is so very passionate and fastidious that when he plunders the nectarium of a flower, if it be deficient in quantity or quality, he tears off the petals and scatters them about, and then indignantly flies to another.

They make an elegant purse-like nest, which is attached, by a slender but strong filament, to the

flexible twig of the black birch; no animal can get at it, nor any wind detach it. They lay two white eggs, the size of a pea; during incubation the cock and hen shew great attachment, and sit on the eggs by turns: they are hatched in twelve days, of two little things not bigger than lady-birds; but how these are nourished by the parents, who live by suction, is not known. They are at other times solitary.

The female Indians, in their language, call the humming-bird—"sunbeam." A squaw is not full dressed without a pair of humming-birds hung to her ears for pendants. What pretty ear-rings!—I fear me that women, in all countries, dearly love a little finery. But now for the other story.

We were gratified, adds the Doctor, by another visiter, still more interesting than the humming-bird, whose genius in plain dress as much surpassed those of all other birds, as the humming-bird excelled them in finery. The oriolle, or mocking-bird, occupied a station in the trees behind Fort George. On his first arrival he was shy and we only heard him; but, when he found his talents were duly appreciated, he no longer concealed himself among the leaves, but perching on a projecting branch, and sure of admiration, he boldly came forward, like one of our musical "stars."

The natural notes of the mocking-bird are exquisite—at once loud, rich, and mellow. They represent those of our own sweet Philomela, "Most musical—most melancholy." But whilst the ear is charmed with the "concord of sweet sounds," our skilful musician suddenly changes the key to the sprightly chant of the sky-lark; and he humours his song, whether plaintive or cheerful, by corresponding gestures, languishing with his head on one side, or clapping his wings, and appearing to caper with joy. But his powers of imitating and mimicry surpass belief. He outwits the world, from the wise philosopher to the silly turkey-hen. He suddenly exhibits the terrible screech of the white-headed eagle, and all the poultry-yard are in commotion; a pause of silence ensues, when we hear twenty wood-peckers tap, tapping the shattering bark of the hickory tree. Then the yelp of the fox sets all the dogs barking, and he keeps up the chase by barking louder than any of them. Anon, he grunts like a sow for her barrow of pigs, and if there be any within hearing they set up a chorus of squeaking, as if impatient for their potatoes at the door of an Irish cabin; another time he gives us a lively flourish of the fife—and forth-with the fifer boys instinctively take their fifes out of their brass cases. And when evening sets in we are serenaded with the croaking of the bull-

frog, whose dissonant sounds may be heard miles off, or the doleful cries of the Whip-poor-Will, or night-hawk, so called from its note exactly resembling that sentence; or, in fine, the lamentable bemoanings of the great horned owl, which doth to the moon complain

> "Of those who, wandering near her nightly bower
> Molest her ancient solitary reign."

Such are the varied powers of this extraordinary bird, that it is difficult to decide which most to admire—its own celestial song, or its wonderful faculty of imitation.

There are several varieties of the oriolle, and some of them are as large as the magpie, but the bird that is gifted with those astonishing talents is a little larger, or rather longer bodied, than the starling: his shape is most elegant, though his plumage is sober and quaker-like. It is dark brown, with a small mixture of white, and there is one golden spot on his back

These birds inhabit chiefly the intertropical countries of America. The select species, however, are not common, and they occasionally emigrate to the more northern parts of the continent, but always return to the warm regions, as they cannot endure cold, any more than the

humming-bird: and this is probably the reason why they have never yet been brought alive to Europe.

The next, and *fifth* Class, is wilder and less known than those we have hitherto mentioned; for, with few exceptions, they delight in solitude, and also partake of a middle nature;—that they, with divided toes, seemingly fitted to live upon land, are at the same time furnished with appetites that chiefly attach them to the waters. BIRDS OF THE CRANE KIND consist of many varieties, but are generally known by their long, scaly legs, and their long necks. And here, my dear young friends, pause with me for a moment to pay the just tribute of admiration to a wise and kind Creator. How incurable a defect would it have been in the bird's conformation, had it been lifted stilt-fashion above its food, which is found in the waters, and which it requires a long neck to reach, without being furnished with an instrument to arrive at it!

The ancients were particularly attached to cranes and storks, and relate many beautiful fables about them, which I wish, for your sakes, I had space to recapitulate. One of the reasons of their admiration was the extraordinary affection with which they said this bird treated its parents in their old age. They are also very

useful in countries abounding in reptiles (whose presence we are spared in this happy land), as they destroy them in great quantities.

Next comes the crested or Balearic crane, some beautiful specimens of which are in the Zoological Gardens. The ordinary ones are destitute of that pretty topping. The common crane is found in almost every country but England, and its domestic virtues deserve our warmest admiration. It is every where gentle and sagacious. The ibis, that bird so venerated by the ancient Egyptians that they worshipped it as a god, belongs to this family: and the graceful demoiselle, of which there are so many at the Zoological Gardens, is another variety. The heron is mentioned as a sagacious bird; and I have heard an anecdote of one in Turkey (a *crested* heron,) who became so much attached to a soldier that she followed him wherever he went, knocked at his door with her long beak, and when she saw him showed the most evident signs of joy: but, when disappointed of meeting him, uttered melancholy complainings. She made a nest under his bed and there laid an egg; and finally, when he went away, pined and died of grief.

The bittern, or mire-drum, is remarkable for his deep, tragic voice—

"Booming from the sedgy shallow:"—

here you see it, as is its wont, silently watching for its prey, by the tranquil waters of a quiet lake; —and the beautiful scarlet flamingo, which, notwithstanding its web feet, is claimed by the stork as a relative, and is taller than the tallest man. Nor must we forget the pretty sandpiper—the gentle, timid, green and grey plover—nor the wild curlew, all of whom, as well as many others, claim affinity with the ancient crane. The Marabou stork appears to inhabit nearly the whole of tropical Africa. Major Denham corroborates the account of the rapidity with which they devour all manner of disagreeable, including rats, vipers, and reptiles of every sort. The Africans are grateful to them in proportion to their utilty, and will not suffer them to be destroyed.

I regret having only sufficient space left to glance at the *sixth* and last class. The careful pelican, whose enormous pouch serves as a depository for food—the albatross, the respectable head of the numerous family of gulls—the voracious cormorant—the stormy petrals, or, as our brave sailors call them, Mother Carey's chickens —the numerous penguin family—and no less numerous swans, geese, ducks, and kingfishers. The distinguishing characteristics of this class are their webbed feet and short legs. Naturalists, however, subdivide this family into three grand distinctions: — those of the gull kind,

that, with longer legs and round bills, fly along the *surface* to seize their prey; those of the penguin kind, that, with round bills, and short legs and wings, *dive* after their prey; and, thirdly, those of the goose kind, who lead harmless, gentle lives, and chiefly subsist upon insects and vegetables. I grieve to say that tame ducks (who have ever been great favourites of mine) are giddy and inattentive to their children. Mr. Drake takes no notice whatever of his young ones, and Mrs. Duck thinks she has sufficiently provided for her offspring when she has shown them the water. I believe there are ten or twelve different sorts of tame ducks, and above twenty varied wild ones. The most obvious distinction between the wild and tame is the colour of their feet—those of the tame duck being yellow, those of the wild duck black.

But my article, with all my anxiety to be as brief as possible, has stretched to an enormous length. Imperfect as it is, I hope it may lead some of my young friends to the study of a science, from which I have derived so much pleasure, that I am anxious it should be participated. I must, before I conclude, relate one anecdote of the swan—a most interesting bird whether we consider it as an auxiliary in a fine landscape, sailing double, "swan and shadow," upon smooth waters, among lonely islands, by

picturesque and sedgy margins, or under the covert of overhanging trees, where, like fair Una, it "makes a sunshine in a shady place," or as the classical bird of the ancients, celebrated for its fabled death-song. Whenever seen upon its own element, the swan is interesting and beautiful. It is also a most affectionate bird, strongly attached to its mate, which it assiduously assists in all the cares of providing for its family. I saw a few years ago, upon a piece of water at Colwick Hall, "with arched neck, between its white wings mantling," a widowed swan, of which an interesting story was told. The female was observed to be stationary in a little willowy island, on which it was supposed to have a nest. The male bird daily, and many times in the day, visited her, taking with him provisions. For the usual time of incubation, the circumstance obtained no farther notice than the expectation of a young brood, and as the swan is jealous of intruders at such times, no one approached the spot. The usual period, however, passed, and still the female remained stationary, the male, as before, continuing his regular attentions. This circumstance, of course, appeared singular, and a visit was paid to the island, when it was discovered that the poor bird was actually at the point of death. The oot had been accidentally set upon the sharp

point of a willow-shoot, which had been cut off, and which, piercing the web, literally pinned her to the spot; and in that state of suffering she had remained many weeks, supported by her faithful and affectionate mate. The fate of this interesting bird was also a melancholy one—it was cruelly and wantonly hunted on the water by fierce dogs, and was obliged to be killed in consequence of the injury it received. I am sorry to conclude with so sad a tale, as I love to see the faces of my young friends sparkling with good humour and happiness, which cannot be the case when they hear of or witness the sufferings of any living thing.

I have, in this paper, in addition to my own stories and remarks, selected such, out of many, kindly furnished to me by Mrs. Howitt, Doctor Walsh, Mr. Blanchard, and other friends, as I conceived most likely to interest and inform my young readers. I have not affected a perfect knowledge of a science which I admire much more than I understand, but I felt that even the little I possessed might be useful to those who were still less instructed; and I have been anxious to draw their attention to the wisdom of that great Being who not only *created* but *provided* for every thing according to its kind. The world may well be said to be filled with his goodness, and the power thereof; and it is a

beautiful idea, which even very little children can feel and understand, that He who clothes the lilies in beauty, and watches over a sparrow's fate, will still more effectually clothe and guard those who are created in His own image.

ANECDOTES OF

SOUTH-AFRICAN BABOONS.

BY THOMAS PRINGLE, ESQ.

The large dog-face baboon of South Africa, (*Simia Cynocephalus, Cercopithecus Ursinus*) is known to naturalist from the descriptions of Sparrman, Vaillant, Burchell, and other scientific travelers. It is an animal of considerable strength, and attains, when full grown, the size of a very large Newfoundland dog. It is covered with coarse shaggy hair, of a brownish colour, except on the face and paws, which are bare and black. On level ground, it always goes on all-fours, like other quadrupeds; but among the rocks and precipices, which are its natural refuge and habitation, it uses its hind-feet, and *hands*, somewhat as a human being would do, only with inconceivable greater boldness and agility, in

springing from cliff to cliff, or in clambering up the crags.

The cynocephalus is not believed to be in any degree carnivorous, but subsists on wild fruits and berries, and principally on the numerous variety of edible roots, which abound in the districts it inhabits. These roots it digs out of the earth with its fore-paws, the nails of which, from this cause, are always short, as if worn down by scratching; in other respects they nearly resemble those of the human hand.

For defence against its numerous and ferocious enemies, such as the leopard, hyæna, wild dog, &c., the cynocephalus is armed with very large and strong canine teeth; and when driven to extremity, will defend itself successfully against the fiercest wolf-hound. It has a mode of grappling its antagonist by the throat with his *hands*, while at the same moment, it tears open the jugular vein with its sharp tusks. In this manner I have known a stout baboon despatch several dogs before he was overpowered; and I have been assured by the natives, that even the leopard is sometimes defeated and worried to death by a troop of these animals. It is only collectively, however, that they can successfully oppose this powerful enemy, who, in many of the mountainous districts, subsists chiefly by preying

upon them, catching them just as a cat does a rat, by lying in wait and pouncing upon them unawares.

With all his strength and capacity for conflict, and in spite of certain evil reports that are circulated to his disrepute, the dog-headed baboon appears to be in reality a very harmless and inoffensive creature; making allowance for a thievish propensity, which he has in common with roguish schoolboys, to rob gardens, orchards, &c., when he can contrive to get at them. There is, indeed, one story told at the Cape, and said to be quite authentic, of a party of these cynocephali carrying off an infant from a farm house in the vicinity of Cape-town, and only resigning it after having been hunted for a whole day, by a numerous party of men and dogs, over the tremendous precipices of the Wynberg mountains. The child, however, when recovered, was found perfectly uninjured: and perhaps this extraordinary abduction (the only instance of the sort I ever heard of in the colony), may have been prompted rather by the erratic affection of some mother bereaved of her own offspring, than by any more ferocious or mischievous propensity.

But however this may be, the strong attachment of these creatures to their own young, is

as unquestionable as it is interesting. In my rambles in South Africa, I have frequently witnessed affecting instances of this attachment, when the inhabitants pursued them from their orchards to the mountains; the females in such emergencies returning to search for the young ones they had lost through the very midst of their mortal enemies.

On more peaceful occasions, also, I have often contemplated them with great pleasure and interest. It is the practice of these animals to descend from their rocky fastnesses in order to enjoy themselves on the banks of the mountain rivulets, and to feed on the nutritious bulbs which grow in the fertile valley ground. While thus occupied, they generally take care to be within reach of a steep crag, or precipice, to which they may fly for refuge on the appearance of an enemy; and one of their number is always placed as a sentinel on some large stone, or other prominent position, in order to give timely warning to the rest of the approach of danger. It has frequently been my lot, when riding through the secluded vallies of that country, to come suddenly, on turning a corner of a wild glen, upon a troop of forty or fifty baboons thus quietly congregated. Instantly on my appearance, a loud cry of alarm being raised by the

centinel, the whole tribe would scamper off with precipitation; splashing through the stream, and then scrambling with most marvellous agility up the opposite cliffs, often several hundred feet in height, and where no other creature without wings, certainly, could attempt to follow them; the large males bringing up the rear-guard, ready to turn with fury upon the dogs, if any attempted to molest them; the females, with their young ones in their arms, or on their shoulders, clinging with arms clasped closely round the mothers' neck. And thus climbing, and chattering, and squalling, they would ascend the almost perpendicular crags, while I looked on and watched them—interested by the almost human affection which they evinced for their mates and their offspring; and sometimes not a little amused, also, by the angry vociferation with which the old ones would scold me when they had got fairly upon the rocks, and felt themselves secure from pursuit.

A TIGER FIGHT.

A man entered the arena (of the Rajah of Coorg), armed only with a Coorg knife, and clothed in short trowsers, which barely covered his hips, and extended halfway down his thighs. The instrument, which he wielded in his right hand, was a heavy blade, something like the coulter of a plough, about two feet long, and full three inches wide, gradually diminishing towards the handle, with which it formed a right angle. This knife is used with great dexterity by the Coorgs, been swung round in the hand before the blow is inflicted, and then brought into contact with the object intended to be struck, with a force and effect truly astounding. The champion. who now presented himself before the Rajah was about to be opposed to a tiger, which he volunteered to encounter almost naked, and armed only with the weapon I have just described. He was rather tall, with a slight figure; but his chest was deep, his arms long and muscular. His legs were thin: yet the action of the muscles was perceptable with every movement, whilst the freedom of his gait, and the few contortions he performed preparatory to the hazardous

enterprize in which he was about to engage, showed that he possessed uncommon activity, combined with no ordinary degree of strength. The expression of his countenance was absolutely sublime when he gave the signal for the tiger to be let loose: it was the very concentration of moral energy—the index of a high and settled resolution. His body glistened with the oil which had been rubbed over it in order to promote the elasticity of his limbs. He raised his arm for several moments above his head when he made the motion to admit his enemy into the area. The bars of a large cage were instantly lifted from above; a huge royal tiger sprang forward and stood before the Coorg, waving its tail slowly backward and forward, erecting the hair upon it, and uttering a suppressed howl. The animal first looked at the man, then at the gallery where the Rajah and his court were seated to see the sports, but did not appear at all easy in its present state of freedom:—it was evidently confounded at the novelty of its position. After a short survey, it turned suddenly round, and bounded into its cage, from which the keepers, who stood above, beyond the reach of mischief, tried to force it, but in vain. The bars were then dropped, and several crackers fastened to its tail, which projected through one of the intervals. A lighted match was put

into the hand of the Coorg; the bars were again raised, and the crackers ignited. The tiger now darted into the arena with a terrific yell, and while the crackers were exploding, it leaped, turned, and writhed, as if in a state of frantic excitement. It at length crouched in a corner, gnarling as a cat does when alarmed. Meanwhile its retreat had been cut off by securing the cage. During the explosion of the crackers, the Coorg stood watching the enemy, and at length advanced towards it with a slow but firm step. The tiger roused itself and retreated, the fur on its back being erect, and its tail apparently dilated to twice the usual size. It was not at all disposed to commence hostilities; but its resolute foe was not to be evaded. Fixing his eyes intently upon the deadly creature, he advanced with the same measured step, the tiger retreating as before, but still presenting its front to its enemy. The Coorg now stopped suddenly; then moving slowly backward, the tiger raised itself to its full hèight, curved its back to the necessary segement for a spring, and lashed its tail, evidently meditating mischief. The man continued to retire; and as soon as he was at so great a distance that the fixed expression of his eye was no longer distinguishable, the ferocious brute made a sudden bound forward, crouched, and sprang, with a short, sharp growl. Its

adversary, fully prepared for this, leaped actively on one side, and as the tiger reached the ground, swung round his heavy knife, and brought it with irresistible force upon the animal's hind leg, just above the joint. The bone was instantly severed, and the tiger effectually prevented from making a second spring. The wounded beast roared; but turning suddenly on the Coorg, who had by this time retired several yards, advanced fiercely upon him, its wounded leg hanging loose in the skin, showing that it was broken. The tiger, now excited to a pitch of reckless rage, rushed forwards upon its three legs towards its adversary, who stood with his heavy knife upraised, calmly awaiting the encounter. As soon as the savage creature was within its reach, he brought down the ponderous weapon upon its head with a force which nothing could resist, laid open his skull from ear to ear, and the vanquished foe fell dead at his feet. He then coolly wiped the knife on the animal's hide, made a dignified salaam to the Rajah, and retired amid the loud acclamations of the spectators. His Highness informed us that the man had killed several tigers in a similar manner; and that, although upon one or two occasions he had been severely scratched, he had never been seriously wounded. The Coorgs, moreover, are known often to attack this terrible

animal, in the jungles, with their heavy, sharp knives, and with almost unfailing success. Upon the present occasion nothing could exceed the cool, cautious, and calculating precision with which the resolute Hindoo went through this dangerous performance."

THE MONKEY AND HIS TORMENTORS.

In the jungles about Tillicherry, there is a large species of monkey, frequently tamed by the natives, and at a village a short distance from this celebrated sea-port we had an evidence of the remarkable sagacity of this animal. A few yards from the house of the person to whom it belonged, a thick pole, at least thirty feet high, had been fixed into the earth, around which was an iron ring, and to this was attached a strong chain of considerable length, fastened to a band round the monkey's body. The ring being loose, it slid along the pole when he ascended or descended. He was in the habit of taking his station upon the top of his bamboo, where he perched as if to enjoy the beauties of the prospect around him. The crows, which in India are very abundant and singularly au-

dacious, taking advantage of his elevated position, had been in the habit of robbing him of his food, which was placed every morning and evening at the foot of the pole. To this he had vainly expressed his dislike by chattering, and other indications of his displeasure equally ineffectual; but they continued their periodical depredations. Finding that he was perfectly unheeded, he adopted a plan of retribution as effectual as it was ingenious. One morning, when his tormentors had been particularly troublesome, he appeared as if seriously indisposed: he closed his eyes, drooped his head, and exhibited various other symptoms of severe suffering. No sooner were his ordinary rations placed at the foot of the bamboo, than the crows, watching their opportunity, descended in great numbers, and according to their usual practice, began to demolish his provisions. The monkey now began to slide down the pole by slow degrees, as if the effort were painful to him, and as if so overcome by indisposition that his remaining strength was scarcely equal to such exertion. When he reached the ground, he rolled about for some time, seeming in great agony, until he found himself close by the vessel employed to contain his food, which the crows had by this time well nigh devoured. There was still, however, some remaining, which

a solitary bird, emboldened by the apparent indisposition of the monkey, advanced to seize. The wily creature was at this time lying in a state of apparent insensibility at the foot of the pole, and close by the pan. The moment the crow stretched out its head, and ere it could secure a mouthful of the interdicted food, the watchful avenger seized the depredator by the neck with the rapidity of thought, and secured it from doing further mischief. He now began to chatter and grin with every expression of gratified triumph, while the crows flew around, cawing in boisterous chime, as if deprecating the chastisement about to be inflicted upon their captive companion. The monkey continued for a while to chatter and grin in triumphant mockery of their distress : he then deliberately placed the captive crow between his knees, and began to pluck it with the most humourous gravity. When he had completely stripped it, except the large feathers in the pinions and tail, he flung into the air as high as his strength would permit, and, after flapping its wings for a few seconds, it fell on the ground with a stunning shock. The other crows, which had been fortunate enough to escape a similar castigation, now surrounded it, and immediately pecked it to death. The animal had no sooner seen this simple retribution dealt to the purloiner of his repast, than he ascended

the bamboo to enjoy a quiet repose. The next time his food was brought, not a single crow approached it.

ORIENTAL ANNUAL.

THE SUN-FLOWER.

A Floral Colloquy.

BY MISS DAGLEY.

ADJOINING a richly adorned flower-garden, and divided from it by only a slight paling, was a narrow slip of ground, which lying between the garden and the fields beyond, and, as it were, belonging to neither, was suffered to run waste; yet this uncultivated spot would have had its attractions, had the qualities of the shrubs which principally occupied it equalled in worth the appearance they displayed: for who that viewed the night-shade, with its flowers of purple and old, and its rich clusters of crimson berries, would imagine that poison lay hid beneath so fair a form? Or who would deem that the hemlock, whose exquisitely indented leaves and fairy blossoms were so lovely to the eye, concealed such deadly qualities?

Content and tranquillity can never inhabit malignant natures, and these noxious plants looked with hatred and envy on the beautiful flowers which adorned the pasture, yet regarded with contempt the innocent and useful offspring of the field; while at the same time, among each other there was perpetual warfare. Those of most similar dispositions were even the most at variance.

The hemlock upbraided the night-shade for displaying her treacherous fruit.

"Never," quoth she, "would I reproach myself with having allured poor children to their destruction by such temptations. Those, indeed, who may be greedy enough to nibble my leaves, or feed upon my flowers, must take the consequences."

"Truly," cried the night-shade, "I admire the credit you take to yourself for harmless intentions, and yet—"

"And yet"—interrupted a fierce nettle which grew hard by, and whose threatening shoots seemed to bid defiance to all who might approach her—"is it not absurd to hear those so much alike in deceit and malice reproach each other? I scorn you both! Madam Night-shade, who bedizens the hedge with her treacherous berries; and you equally, my Lady Hemlock, for the display of your delicate flowers, as a type of

whose innocence, no colour forsooth, but pure white will suffice!"

"Nay, cousin," exclaimed another species of nettle which flourished at a little distance, "you degrade your kin by such violent language. Although your observation is just upon the vile deception of one, who assumes for her poisonous flowers the same spotless hue as that of my honey-distilling blossoms—"

"What!" said the hemlock, "is the merit of innocence claimed by such a cowardly wretch, who, it is well known, never fails to implant her venomous sting in the hands of the gentle and unwary, while those who daringly seize and crush her malignant stem, pass free and unharmed?"

"Even so," replied the prickly nettle; "and I would as soon hold kindred or friendship with the night-shade itself, as with a creature who bears a weapon she does not display. I neither feel nor hold out any semblance of good will. Those who would pluck my flowers know what they have to expect. I wear no false appearances."

"Methinks," observed an overgrown burdock, "you might take credit for honesty, if, like me, you were satisfied with a plain exterior; but while your top is decorated with flaunting blossoms, and your stem armed with those angry

points, it is rather too much to hear you claim the merit of good intentions: for my own part, I can safely aver that I am neither better nor worse than my appearance bespeaks me."

The irritable nettle was about to make an angry rejoinder, when the subject was thus taken up by a dandelion.

"Methinks, Mr. Dock, since you acknowledge yourself of no great worth, (which, indeed, is true enough, considering you are neither useful nor ornamental,) it would best become you to curl your cumbrous leaves into a less compass than what they at present occupy, and not take up a space which might be better filled. I am the last root to vaunt my own good qualities, yet I must say that seeing I am, as I believe, the only wholesome plant in this place, rather more consideration is due to me than I generally receive."

The surly dock deigned no answer to the flippant dandelion, which continued its unavailing struggle against the encroachments of its stern neighbour, the dock, on one side, and those of a root of wild horse-radish on the other.

But, in the midst of these petty warfares, a subject of general curiosity appeared, so as to lull, for the present, all animosities into one common interest; and this was the rise and pro-

gress of a plant, of a nature evidently superior to any of those who inhabited this wild spot.

The stranger plant had been growing for some time, without exciting much care or suspicion, being small, weakly, and so worm-eaten that the form of its leaves was scarcely perceptible; but after long struggling through the obstacles which for a while impeded its growth, it began to assume a character calculated to raise at once wonder and envy. The slender stalk became tall and erect, the leaves increased in breadth and numbers, and a bud of uncommon size decorated the top. Still there was nothing in its demeanour to excite ill-will; and that it was a flower of exalted rank was not more evident by its stately form, than by its reserve and forbearance, in not retaliating the sarcasms of its malignant neighbours.

Meanwhile, those who had been most bitter against each other now united in the common cause of persecuting the stranger plant.

"I wonder," said the malicious hemlock, "why your fine garden flowers cannot keep to their own pasture: had I been one of those pampered exotics, I should hardly like to have quitted so much refinement; for truly, if delicate plants will come among common ones, they must expect matters to go but roughly."

"I, for one," exclaimed the fierce nettle,

"feel myself by no means disposed to give way to the arrogant pretensions of an upstart. In this spot have I flourished time out of mind, every season increasing in size and power, nor shall one of my smallest suckers yield place or precedence to the proudest garden flower that ever grew."

"I commend your spirit and resolution," cried the hemlock, "and think we ought all to unite in withstanding the encroachments of a common enemy, who, it is very evident, has sprung up with the intention of supplanting us all; and I should advise my neighbour night-shade to look to it, or even her lofty branches may be over-topped."

The night-shade made no answer, but that of disdainfully heaving her boughs over the object of general odium, which, however, apparently regardless of the enmity expressed towards it by these unfriendly shrubs, continued its upward growth, the bud still increasing in size; and at length a sun-flower, as splendid in colour, as graceful in form, as ever decked the richest garden, opened its golden petals on the sight, shedding light and lustre around.

In the midst of these wild and ill-conditioned leaves, and very near to the sun-flower, there grew a marsh-mallow, a plant of a kindly nature, which had long regarded the hapless exile with

interest, and at length could not refrain from expressing its sympathy.

"Beautiful and unfortunate stranger," said the marsh-mallow, "suffer me to condole with you on your sad destiny; and think not that I address you with a supposition, that because we grow on the same spot you are therefore my equal, and one with whom I may claim familiarity; but I cannot help expressing my pity for a fate like yours, and my wonder at the patience with which you sustain it. That you are a flower of superior rank I feel and understand, and I would fain enquire whether chance or choice brought you to this unfriendly spot."

"Gentle friend," replied the sun-flower, "I thank you for your sympathy; the voice of kindness is grateful as the evening dew; but in return let me assure you that my situation is not at present so unhappy as you may imagine. I will, however, recount my short history; for, although you may have witnessed the many hardships I have suffered, you cannot be aware of all that I have endured; but though the stem of adversity is beset with thorns, its fruit is rich and precious. It was indeed chance and not choice which brought me hither; for the seed from which I sprung, had, as I conjecture, been wafted from a more genial soil. Never shall I forget on what a scene of wild desolation I first unclosed

my leaves, surrounded by rude weeds—all regarding me with ill-will, and unanimous in their endeavours to impede my growth. The wretchedness of my situation was still further aggravated by my viewing, in yon gay garden, plants of my own species flourishing in all the luxury of high cultivation, nurtured with care, and secured from the hardships by which I was surrounded. It was no fault of theirs that I was thus unfortunate, yet I felt anger and envy whenever I regarded their more prosperous condition. How cruel a fate is mine, thought I, to bear the rank of a garden flower without any of its privileges —doomed to grow among the wildest weeds, without possessing their strength and hardiness? I even wished to be armed like the nettle, or for the power to destil poisons like the night-shade. My existence was absorbed in these bitter and rancorous feelings, which, the more I nourished them, became the more tormenting; and hourly did I regret that the seed from which I sprung had not perished in the earth. There appeared, however, a great probability that I should not have long to mourn my miserable conditon; for my frail stem was now fast declining, the cold ungenial soil seemed to yield no nourishment to my root, and the insects were making daily havoc with my few leaves. I had not, however, sufficiently known my own nature when I desired my existence annihilated; for now that my impatient

wishes appeared about to be fulfilled, as I felt my fibres shrink and my leaves decay, I experienced a pang, and comfortless as my condition was I still desired to exist. For a considerable period I continued in this state, neither growing nor dying. Gradually the face of nature assumed a gentler aspect; the air became mild, and a soft rain revived the parched earth: my shrinking root drank in the refreshing moisture; my stem shot upwards, and I caught a gleam from the glorious orb of day; my leaves expanded in its benign ray, and I felt, for the first time, a sensation of grateful gladness. Not only did the blessed source of light shed new light and vigour into my frame, but as I daily grew beneath its gracious influence, my discontented feelings subsided into resignation, and my angry ones into those of pity; nor do I any longer regard with envy the gay children of the pasture; for had I held a station amongst them, and been pampered with luxury, I might perchance have felt less gratitude towards that glorious orb whose image I reflect, and whose name it is my proud privelege to bear; the happy aim of my existence now is to direct the progress of my opening buds, to catch those refulgent beams whose kindly influence, while it strengthens me to endure hardships, subdues the desire of resenting injuries."

THE SPIDER, CATERPILLAR, AND SILKWORM.

"What sort of a weaver is your neighbour, the Silkworm?" said a Spider to a Caterpillar. "She is the slowest, dullest creature imaginable," replied the Caterpillar; "I can weave a web sixty times as quick as she can. But then she has got her name up in the world, while I am constantly the victim of envy and hatred. My productions are destroyed, sometimes rudely and boldly, sometimes with insidious cunning; but her labours are praised all the world over—mankind wreath them with flowers, embroider them with gold, and load them with jewels." "I sympathize with you deeply," said the Spider; "for I too am the victim of envy and injustice. Look at my web extended across the window pane. Did the Silkworm ever do any thing to equal its delicate transparency? Yet in all probability to-morrow's sun will see it all swept away by the unfeeling housemaid. Alas, my sister! genius and merit are always pursued by envy."

"Foolish creatures," exclaimed an Ant, who overheard their complaints. "You, Lady Cater-

pillar, who boast of your *rapid* performances, let me ask you what is their value? Do they not contain the eggs that will hereafter develope themselves, and destroy blossom and fruit?—even as the hasty and selfish writer winds into his pages principles wherewithal to poison the young heart's purity and peace?

"As for you, Dame Spider, you are hardly worthy of a rebuke. Your transparent web is broken by a dewdrop as some pretty poetry is marred by the weight of a single idea. Like other framers of flimsy snares, you will catch a few silly little flies, and soon be swept away—the ephemera of an hour. But rail not at productions which you cannot understand! Learn to be content in your present obscurity, as to it alone you enjoy your safety, and in future attempt not to raise up fame for yourself, by slandering your neighbour—the world is wise enough to find out your talents, if you have got any; and, if they do not find them out, so speedily as your vanity may desire, depend upon it, they will not award them to you on your own report. How can such as you estimate the labours of the Silkworm? Like genius expiring in the intensity of its own fires, she clothes the world in the beauty she dies in creating."

THE MUSCLE.

BY THE REV. ROBERT WALSH, LL.D.

C. Papa, what is the meaning of this hard word—conchology ?

F. Conchology means the knowledge of shells.

C. But what knowledge can one get from shells? They are very pretty indeed, but that I can see without conchology.

F. Every shell is a house, containing one or more living inhabitants, whose habits and mode of existence are sometimes very curious.

C. Now here is this poor stupid muscle—there is nothing inside that I can see but a soft lump without any shape, and no signs of life; what can there be curious in that?

F. The shapeless lump, as you call it, has a regular figure, with parts as necessary to the fish as arms and legs to a man.

C. Oh, now I see it begins to move, and change its shape like a snail; but it has no eyes like those on a snail's horns.

F. No, because eyes are not necessary. You see those threads hanging out of the end of the shell; by these it is firmly fixed to a rock or other substance, and all the waves of the sea

cannot disturb it: it wants, therefore, no eyes to see its way, because it never moves from place to place; but when they are necessary for its security, nature supplies them in a very curious manner.

C. Oh, dear papa, tell me how.

F. There is a large kind of muscle called the *pinna**, and it has a voracious enemy called the cuttle-fish†, which has eight long arms; and whenever the poor pinna opens its shell to take in its food, the cuttle-fish is on the watch to thrust in its long arms and devour it, if a good friend of the pinna who lodges in her house was not at hand to prevent him.

C. A friend who lodges in her house! Oh, papa, you are joking.

F. The friend is a little crab, which the pinna suffers to live in her shell, and "who pays her," as an old writer says, "a good price for his lodging." The little crab has red eyes, and sees very sharply; so whenever his blind friend opens her shell, he is always on the watch for the enemy; and as soon as he sees him coming with his long arms like an ogre, he gives notice to the pinna by giving her a little pinch with his claw, and immediately she closes her large shell, as a

* Pinna ingens, sea wing.

† Sepia octopodia.

careful person locks up his house and shuts out a robber.

C. Is that true, papa?

F. It is mentioned by many writers, both in ancient and modern times, who have watched the fishes and seen the circumstance.

C. Did you ever see it?

F. I did when I was in the East. The harbour of Smyrna is full of this large muscle, and also abounds with the cuttle-fish. I was one day crossing in a boat; and, as the water was very clear, I saw several at the bottom, and some pinnas opening and some closing their shells; so I was curious to examine them. One of the sailors swam remarkable well: he leaped overboard, dived down, and brought up several of the fish; in every one of them was a little crab. As soon as the pinna opened her shell, he appeared like a sentinel, with his red eyes; and when any thing approached, he ran in, seemed to warn his friend, and the shell closed. The crab is therefore called pinnophylax, or the muscle's guardian*.

C. That is very curious indeed; but is the fish of any use to us?

F. Besides being food for man, for whose support all things were created, the beard or

* Cancer pinnotheris, or pinnophylax.

threads of the muscle are applied to a good purpose; they are sometimes so long, that the fish hangs suspended by them from some projection to a considerable depth in the water. As the poet says,

> Firm to his rock, with silver cords, suspend
> The anchor'd Pinna, and her Cancer friend.

These "silver cords" are very fine and strong, like the fibres of silk, and are used for the same purpose: they are manufactured into different articles of dress, and I have seen gloves and stockings made of them.

C. Oh, I should like to have a pair of muscle gloves; but is there any thing else curious or useful in the fish?

F. Yes, there is another kind, called *mya**, inhabiting fresh water, which yields fine pearls. It is frequently found in the rivers of the north of Ireland, and I have seen some very large pearls indeed taken from the shell. They are also frequently found in England; and some authors say that Julius Ceasar, who, you know, invaded England a long time ago, was induced to come here in search of those fine pearls, of which he had heard a great account from the Gauls, who traded to this country.

* Mya margaritifera, pearl-yielding muscle.

C. Is the pearl of any use to the fish?

F. I think it is; the covering of shell-fish is intended by Providence as their house; and, like all houses, require to be repaired or enlarged, as the inhabitants require. Nature, therefore, provides for all the means of doing this, in different ways. In the common snail there is a substance at the point of the shell, which is so viscid or tough, that when taken out, it mends broken glass: this is conveyed to the edge of the shell by a little tube, and continually enlarges it as the animal within increases in size. In crabs there is also a substance which you may have often seen called, improperly, the *crab's eyes*, and used as medicine in apothecaries' shops: this is also intended to repair or enlarge the crab's house, as he wants it. It is very justly supposed that the pearl is intended for the same purpose by nature, for the use of the shell-fish in which it is found.

C. I had no idea there were so many useful and curious things in a muscle; I suppose there is the same in every shell-fish.

F. No doubt there is; but our acquaintance with God's creation is very limited, and our ignorance is much greater than our knowledge. We may judge however by what we know of what we do not know: every day is adding some new and extraordinary proof of God's

wisdom and love, giving us fresh cause for praise and wonder, and declaring "His goodness beyond thought and power divine."

DESCRIPTION OF THE MOCKING BIRD, &c.

By Alexander Wilson, the American Ornithologist.

The plumage of the mocking-bird, though none of the homeliest, has nothing grand or brilliant in it; and, had he nothing else to recommend him, would scarcely entitle him to notice; but his figure is well-proportioned, and even handsome. The ease, elegance, and rapidity of his movements, the animation of his eye, and the intelligence he displays in listening, and laying up lessons from almost every species of the feathered creation within his hearing, are really surprising, and mark the peculiarity of his genius. To these qualities we may add that of a voice full, strong, and musical, and capable of almost every modulation, from the clear, mellow tones of the wood-thrush, to the savage scream of the bald eagle. In measure and accent he faithfully follows his originals. In force and sweetness of expression, he greatly improves upon them. In his native groves, mounted upon

the top of a tall bush, or halfgrown tree, in the dawn of dewy morning, while the woods are already vocal with a multitude of warblers, his admirable song rises pre-eminent over every competitor. The ear can listen to his music alone, to which that of all the others seems a mere accompaniment. Neither is this strain altogether imitative. His own native notes, which are easily distinguishable by such as are well acquainted with those of our various song birds, are bold and full, and varied seemingly beyond all limits. They consist of short expressions of two, three, or at the most five or six syllables, generally interspersed with imitations, and all of them uttered with great emphasis and rapidity; and continued, with undiminished ardour, for half an hour, or an hour, at a time; his expanded wings and tail glistening with white, and the buoyant gaiety of his action, arresting the eye, as his song most irresistibly does the ear. He sweeps round with enthusiastic ecstasy—he mounts and descends as his song swells or dies away, and as my friend, Mr. Bartram, has beautifully expressed it, "he bounds aloft with the celerity of an arrow, as if to recover or recal his very soul, which expired in the last elevated strain." While thus exerting himself, a bystander, destitute of sight, would suppose that the whole feathered tribes

had assembled together, on a trial of skill, each striving to produce his utmost effect, so perfect are his imitations. He many times deceives the sportsman, and sends him in search of birds that perhaps are not within miles of him, but whose notes he exactly imitates. Even birds themselves are frequently imposed on by this admirable mimic, and are decoyed by the fancied calls of their mates, or dive, with precipitation, into the depths of thickets, at the scream of what they suppose to be the sparrow-hawk.

The mocking-bird loses little of the power and energy of his song by confinement. In his domesticated state, when he commences his career of song, it is impossible to stand by uninterested. He whistles for the dog; Cæsar starts up, wags his tail, and runs to meet his master. He squeaks out like a hurt chicken, and the hen hurries about with hanging wings, and bristled feathers, clucking to protect her injured brood. He runs over the quiverings of the canary, and the clear whistlings of the Virginia nightingale or red-bird, with such superior execution and effect, that the mortified songsters feel their own inferiority, and become altogether silent, while he seems to triumph in their defeat by redoubling his exertions.

This excessive fondness for variety, however, in the opinion of some, injures his song. His

elevated imitations of the brown thrush, are frequently interrupted by the crowing of cocks, and the warblings of the blue-bird, which he exquisitely manages, are mingled with the screaming of swallows, or the cackling of hens; amidst the simple melody of the robin, we are suddenly surprised by the shrill reiterations of the whip-poor-will, while the notes of the kildeer, blue jay, martin, baltimore, and twenty others succeed, with such imposing reality, that we look round for the originals, and discover. with astonishment, that the sole performer in this singular concert is the admirable bird now before us. During this exhibition of his powers, he spreads his wings, expands his tail, and throws himself around the cage in all the ecstasy of enthusiasm, seeming not only to sing but to dance, keeping time to the measure of his own music. Both in his native and domesticated state, during the solemn stillness of night, as soon as the moon rises in silent majesty, he begins his delightful solo, and serenades us with a full display of his vocal powers, making the whole neighbourhood ring with his inimitable medley.

THE BALD EAGLE.

This distinguished bird, as he is the most beautiful of his tribe in this part of the world,

and the adopted emblem of our country, is entitled to particular notice. He has been long known to naturalists, being common to both continents, and occasionally met with from a very high northern latitude to the borders of the torrid zone, but chiefly in the vicinity of the sea, and along the shores and cliffs of our lakes and large rivers. Formed by nature for braving the severest cold: feeding equally on the produce of the sea, and of the land; possessing powers of flight capable of outstripping even the tempests themselves; unawed by any thing but man; and from the ethereal heights to which he soars, looking abroad, at one glance on an immeasurable expanse of forests, fields, lakes, and oceans deep below him; he appears indifferent to the little localities of change or season; as in a few minutes he can pass from summer to winter, from the lower to the higher regions of the atmosphere, the abode of eternal cold; and thence descend at will to the torrid or the arctic regions of the earth. He is therefore found at all seasons in the countries which he inhabits; but prefers such places as have been mentioned above from the great partiality he has for fish.

In procuring these he displays, in a very singular manner, the genius and energy of his character, which is fierce, contemplative, daring, and tyrannical: attributes only ex-

erted on particular occasions, but when put forth, overpowering all opposition. Elevated upon a high dead limb of some gigantic tree, that commands a wide view of the neighbouring shore and ocean, he seems calmly to contemplate the motions of the various feathered tribes that pursue their busy avocations below: the snow-white gulls slowly winnowing the air; the busy tringœ coursing along the sands; trains of ducks streaming over the surface; silent and watchful cranes, intent and wading; clamorous crows, and all the winged multitude that subsist by the bounty of this vast liquid magazine of nature. High over all these hovers one, whose action instantly arrests all his attention. By his wide curvature of wing, and sudden suspension in air, he knows him to be the fish-hawk settling over some devoted victim of the deep. His eye kindles at the sight, and balancing himself with half-opened wings on the branch, he watches the result. Down, rapid as an arrow from heaven, descends the distant object of his attention, the roar of its wings reaching the ear as it disappears in the deep, making the surges foam around. At this moment the looks of the eagle are all ardour, and levelling his neck for flight, he sees the fish-hawk emerge, struggling with his prey, and mounting

into the air with screams of exultation. These are the signal for our hero, who, launching in the air, instantly gives chase, soon gains on the fish hawk; each exerts his utmost to mount above the other, displaying in these rencontres the most elegant and sublime ærial evolutions. The unincumbered eagle rapidly advances, and is just on the point of reaching his opponent, when with a sudden scream, probably of despair and honest execration, the latter drops his fish; the eagle, poising himself for a moment, as if to take a more certain aim, decends like a whirlwind, snatches it in his grasp ere it reaches the water, and bears his ill gotten booty silently away to the woods.

THE END.